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BOTANICAL MAGAZINE;

OR

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In which the most Ornamental FOREIGN PLANTS cultivated in the Open Ground, the Green-House, and the Stove, are accurately represented and coloured.

To which are added,

THEIR NAMES, CLASS, ORDER, GENERIC AND SPECIFIC CHARACTERS, ACCORDING TO THE SYSTEM OF LINNÆUS;

Their Places of Growth, Times of Flowering, and most approved Methods of Culture.

CONDUCTED

By SAMUEL CURTIS, F. L. S.

THE DESCRIPTIONS

By WILLIAM JACKSON HOOKER, L. L. D.

F. R. A. and L. S. and Regius Professor of Botany in the University of Glasgow.

VOL. IX.

OF THE NEW SERIES;

Or Vol. LXII. of the whole Work.

"Well they reward the toil. The sight is pleased,
The scent regaled. Each odoriferous leaf,
Each opening blossom freely breathes abroad
Its gratitude, and thanks Him with its sweets."

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1835.

TO

C. F. H. VON LUDWIG, PH. D.

KNIGHT OF THE WIRTEMBERG CIVIL MERIT AND

CROWN ORDERS,

THE FRIEND AND PATRON OF BOTANY

AT THE CAPE OF GOOD HOPE,

TO WHOM

OUR EUROPEAN GARDENS ARE INDEBTED

FOR MANY AFRICAN PLANTS OF GREAT RARITY AND BEAUTY,

THE PRESENT VOLUME IS INSCRIBED,

BY HIS FAITHFUL

AND OBLIGED FRIEND AND SERVANT,

W. J. HOOKER.

GLASGOW, December 1, 1835.

Pub.by S.Curtis Blackmwood Res.ce Jan.y 1 1835

Swan Sc.

HABENARIA GIGANTEA. GIGANTIC HABENARIA.

****

Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ. § OPHRYDEÆ.)

Generic Character.

Cor. ringens. *Labellum* basi subtus calcaratum. *Glandulæ* pollinis nudæ, distinctæ, (loculis pedicellorum adnatis v. solutis distinctis.) *Br.*

Specific Character and Synonym.

HABENARIA *gigantea;* tuberibus indivisis, labio tripartito, lobis lateralibus sursum curvatis pectinatis intermedio porrecto lineari-spathulato, cornu longissimo, petalis 2 interioribus linearibus falcatis.

ORCHIS gigantea. *Smith Ex. Bot. v. 2. p.* 79. *t.* 100.

In the month of June of the present year, we had the high gratification to receive at the Glasgow Botanic Garden, among other terrestrial Orchideous plants from Bombay, roots of the present individual from JOSEPH NIMMO, Esq., under the name of ORCHIS *Susannæ*. These have flowered in great perfection in the following month of September, yielding a delicious fragrance, and have added a truly splendid plant to the already rich collection of Orchideæ in that establishment. I am not however able to satisfy myself that it is the species so called by LINNÆUS, He refers to the " FLOS *Susannæ* of RUMPHIUS, figured in Herm. Par. Bat. t. 209, and in the Herbarium Amboinense, v. 5. p. 99 : but, however they may represent our plant in the general structure of the flower, as far at least as can be judged from such imperfect figures, they are both figured and described as much smaller in all their parts than our plant,

plant, which is certainly the O. *gigantea* of Sir J. E. Smith. It was found by Dr. Buchanan in Upper Nepal, and in the Mysore country, and we possess specimens from the Countess of Dalhousie, gathered by her ladyship at Simla in Nepal. The true Orchis *Susannæ* appears to be confined to Amboyna, and Sir J. Smith describes the flowers as of a very brilliant white. About Bombay, Mr. Nimmo says, the present species is extremely rare: its flowers measure nearly four inches between the extremes of the two lateral sepals.

Descr. *Stem* from three and a half to four feet high, erect, stout, very leafy: lower *leaves* broadly elliptical concave, gradually passing upwards with sheathing *bracteas*. *Raceme* of four to six, very large, greenish white, very fragrant *flowers*. Three outer *petals*, or *sepals*, obovate, spreading, the upper one peculiarly broad: two inner ones, or *petals*, linear, falcate, about as long as the outer. *Lip* large, tripartite: the lateral lobes pectinated, curved upwards; the intermediate one linear-spathulate, entire, standing forward: *spur* very long, green: *Anther* large, the base of the cells remote. *Pollen mass* club-shaped; *granules* brownish-yellow.

Fig. 1. Lower Leaf: *nat. size.* 2. Lip and part of the Spur. 3. Column with the Anther. 4. Pollen masses: *magnified.*

Mrs C.M. Pope del.t

Pub.d by S. Curtis Glazenwood Essex Jun.y 1. 1835.

Swan Sc.

TROPÆOLUM MAJUS; *var.* atro-sanguineum. GREATER INDIAN CRESS or NASTURTIUM; dark-red *var.*

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Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—TROPÆOLEÆ.)

Generic Character.

Cal. 5-partitus, lobo superiore calcarato. *Pet.* 5, inæqualia 3 inferiora minora aut evanida. *Stam.* 8 ab ipsa basi libera. *Carpella* 3, suberosa, reniformia indehiscentia, hinc sulcata rotundata.

Specific Character and Synonyms.

TROPÆOLUM *majus;* foliis peltinerviis orbiculatis subquinquelobis, nervis apice non exsertis, petalis obtusis. *D C.*

TROPÆOLUM majus. *Linn. Sp. Pl. p.* 490. *Curt. Bot. Mag. t.* 23. *Spreng. Syst. Veget. v.* 2. *p.* 226. *De Cand. Prodr. v.* 1. *p.* 683.

(β.) *atro-sanguineum;* floribus atro-sanguineis. *Sw. Br. Fl. Gard. t.* 204. (Tab. nostr. 3375.)

The Common or greater *Indian Cress,* though a native of Peru, proves a hardy annual in this country, and has been cultivated in Europe ever since 1684. From the ease with which it may be propagated, and the great beauty of the flowers, it is a great favourite with the humble cottager; its frequency having almost banished it from the gardens of the more curious in flowers. The older Botanists called it "*Viola inodora, scandens,* nasturtii *sapore,*" &c.: and hence its English name of *Nasturtium,* and *Indian Cress.* The Cress-like flower is, indeed very remarkable; and it is a well-known fact, that the caterpillars of the white butterflies, which usually feed upon Cruciform plants, readily devour

devour the leaves of Tropæolum, though belonging to a widely different natural family.

Beautiful as are the flowers of the common state of our Tropæolum, the *present* variety far exceeds them; the colour being a remarkably rich blood-red, with a fine velvety lustre. Of the origin of this variety we are ignorant, and whether it will be propagated by seeds. It may be increased by cuttings, and is indeed already not uncommon in gardens. The beautiful drawing here engraved was made by Miss Pope, from plants which flowered during the summer of 1834, in the Glazenwood nursery.

W. Fitch del.t

Pub. by S. Curtis Glasenwood Elm Jan.y 1. 1835.

Swan sc.

ANEMONE VITIFOLIA. VINE-LEAVED ANEMONE.

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Class and Order.

POLYANDRIA POLYGYNIA.

(Nat. Ord.—RANUNCULACEÆ.)

Generic Character.

Involucrum trifolium à flore distans, foliolis incisis. *Calyx* petaloideus, 5—15-sepalus. *Petala* o. *De Cand.*

Specific Character and Synonyms.

ANEMONE *vitifolia;* foliis rotundato-cordatis, 5—7-lobis subtus cauleque adpressè lanuginosis radicalibus longè petiolatis involucellis subsessilibus trifidis, sepalis ovalibus extus sericeis, pistillis supernè glabris, caryopsidibus pedicellatis, muticis densissimè lanuginosis. *Wall. in Bot. Reg.*

ANEMONE vitifolia. *Buchan. in De Cand. Prodr. v.* 1. *p.* 21. *Lindl. Bot. Reg. t.* 1385.

The present is one of the few ANEMONES from Northern India that are cultivated in our gardens, to which it was introduced by Lord AMHERST. Dr. WALLICH informs us that "it is one of the commonest, as well as most ornamental flower-plants in Nepal, where it grows in all the forests of the great valley, and the surrounding mountains, delighting in the most shady, retired, and moist situations in the vicinity of rills and torrents." It is also found in Kamoun and in Gossam-Than, in the Himalaya. Our flowering specimens were sent in October, 1834, by Mr. N. DON, from Knyppersley Gardens, near Congletan, where they flourished in the open border.

DESCR. *Stem,* in our plant, about a foot and a half high, (two to three feet high, according to Dr. WALLICH,) erect, nearly

nearly simple, clothed with appressed hairs. *Radical-leaves* upon long stalks, cordate, lobed and coarsely serrated, much nerved and somewhat wrinkled, glabrous above, downy and paler beneath. The *involucre*, both in our wild and cultivated specimens, seems to consist of two leaves scarcely differing from those of the root, except in being smaller; within these are two still smaller ones, from within which arise the *peduncles*, three to four in number, each bearing a single *flower*, drooping in the state of the bud, afterwards erect. *Sepals* five, obovate, concave, white. *Stamens* numerous, yellow. *Head of Pistils* roundish-ovate.

Fran.n Bauer. del.t Pub.d by S. Curtis. Glasenwood Essex Jan.y 1. 1835.

MICROTIS PARVIFLORA. SMALL-FLOWERED MICROTIS.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ. § ARETHUSEÆ.)

Generic Character.

Perianthium ringens, *foliolis lateralibus* exterioribus sessilibus, labello suppositis; *interioribus* subsimilibus, adscendentibus. *Labellum* dissimile, oblongum, obtusum basi callosâ. *Anthera* columnam infundibuliformem posticè terminans, auriculo membranaceo utrinque aucta (unde nomen.) *Massæ Pollinis* utriusque loculi binæ, pulvereæ, basi affixæ stigmatis apice soluto.—Herbæ *glabræ*. Bulbi *indivisi, nudi*. Folium *caulinum unicum, fistulosum, teres, vaginâ longâ*. Spica *multiflora*. Flores *parvi, virescentes, v. albi, labello indiviso v. bilobo*. *R. Br.*

Specific Character and Synonyms.

MICROTIS * *parviflora;* perianthii foliolis inferioribus revolutis interioribusque linearibus, labello lineari-oblongo integerrimo: marginibus nudis; disco dimidii superioris ecalloso, spicæ floribus omnibus approximatis. *Br.*

MICROTIS parviflora. *Br. Prodr. v.* 1. *p.* 321. *Spreng. Syst. Veget. v.* 3. *p.* 713.

Sent by ALLAN CUNNINGHAM, in 1824, with others of the very curious terrestrial ORCHIDEÆ of New South Wales to His Majesty's Garden at Kew, where it flowered in October, 1828, when the drawing, which Mr. BAUER has obligingly communicated to us, was made. In September of the present year the same plant flowered in the greenhouse of the Glasgow Botanic Garden, among a box of rare ORCHIDEÆ sent by Mr. RICHARD CUNNINGHAM from the same country, the preceding year. In the colony of Port Jackson,

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* From *μικρος, small,* and *ους ὠτὸς, an ear,* from the small auricle on each side the column.

Jackson, Mr. Allan Cunningham observes, " the species affects clayey soils in low, damp forest grounds, where, should the season prove moderately moist, and therefore favourable to the reanimation of the whole tribe, it appears in abundance, with the several species of Diuris, which, like the *Crowfoots* of our English meadows, bespangle the grassy lands of that colony, with their rich and various bright-yellow flowers, in the months of spring."

Descr. An extremely slender plant, eight to ten inches high, simple, bearing a single, subulate fistulose *leaf*, arising from near the middle. *Spike* terminal, of many small, pale green, inconspicuous flowers, each subtended by a small *bractea*. The oblong, angular germen occupies the greater portion of the flower. Upper *sepal* nearly orbicular, concave, acute: two lateral ones linear-oblong and revolute, dotted with red. *Petals* linear, almost white. *Lip* small, linear-oblong, acute, recurved, entire, with two callosities at the base. *Column* short, white, with an auricular appendage on each side at the top, between which the *Anther* is situated.

Fig. 1. A front, and fig. 2, a side view of the Flower: *magnified* eight diameters. 3 and 4. Front and side views of the Column and Labellum of the same Flower: *magnified* sixteen times in diameter. 5. Front and side views of the Pollen masses, *magnified* sixteen times in diameter. 6. Pollen grains, *magnified* two hundred times in diameter.

In this place may be noticed another species, which Mr. Brown many years ago, (Prodr. 1. p. 320. *in Obs.*) referred to this Genus, but which has not yet been sufficiently defined by Botanists in any work. It is a native of New Zealand; was originally discovered by Sir Joseph Banks in Captain Cook's first voyage of circumnavigation, and was afterwards met with by Forster and others. It appears to stand intermediate between Mr. Brown's M. *rara*, and that eminent Botanist's M. *media*, of which a description and figure is given in the next article, and it may be named and characterized as follows.

M. *Banksii*; perianthii foliolis inferioribus ovato-lanceolatis subpatentibus: interioribus lineari-oblongis obtusiusculis, labello oblongo-cuneato lobato: dimidio inferiore dilatato retuso, disco verrucoso, marginibus tuberculato-incrassatis, spica floribus præcipuè distinctis, inferioribus distantibus.

Ophrys unifolia. *Forst. Prodr. n.* 311.

Epipactis porrifolia. *Swartz in Act. Holm.* 1800. *p.* 233. *Pers. Syn.* 2. *p.* 513. *Willd. Sp. Pl.* 4. *p.* 89.

Microtis porrifolia. *Spreng. Syst. Veget.* 3. *p.* 713.

Hab. in filicetis apertis Novæ Zelandiæ, inter Bay of Islands et Wangaroa, &c. *Illustr. Banks. Forster. R. Cunningham.*

Obs. Nomen specificum Sprengelii (*porrifolia*) rejectum est, quoniam toto genere convenit.

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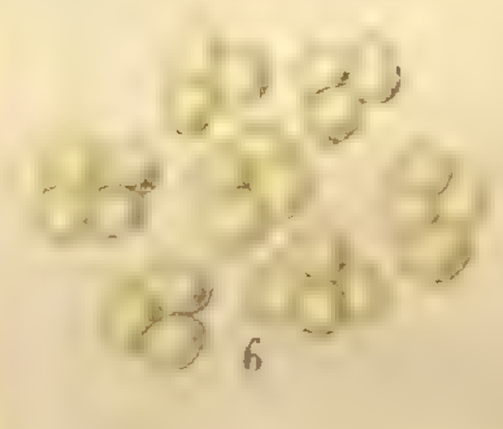
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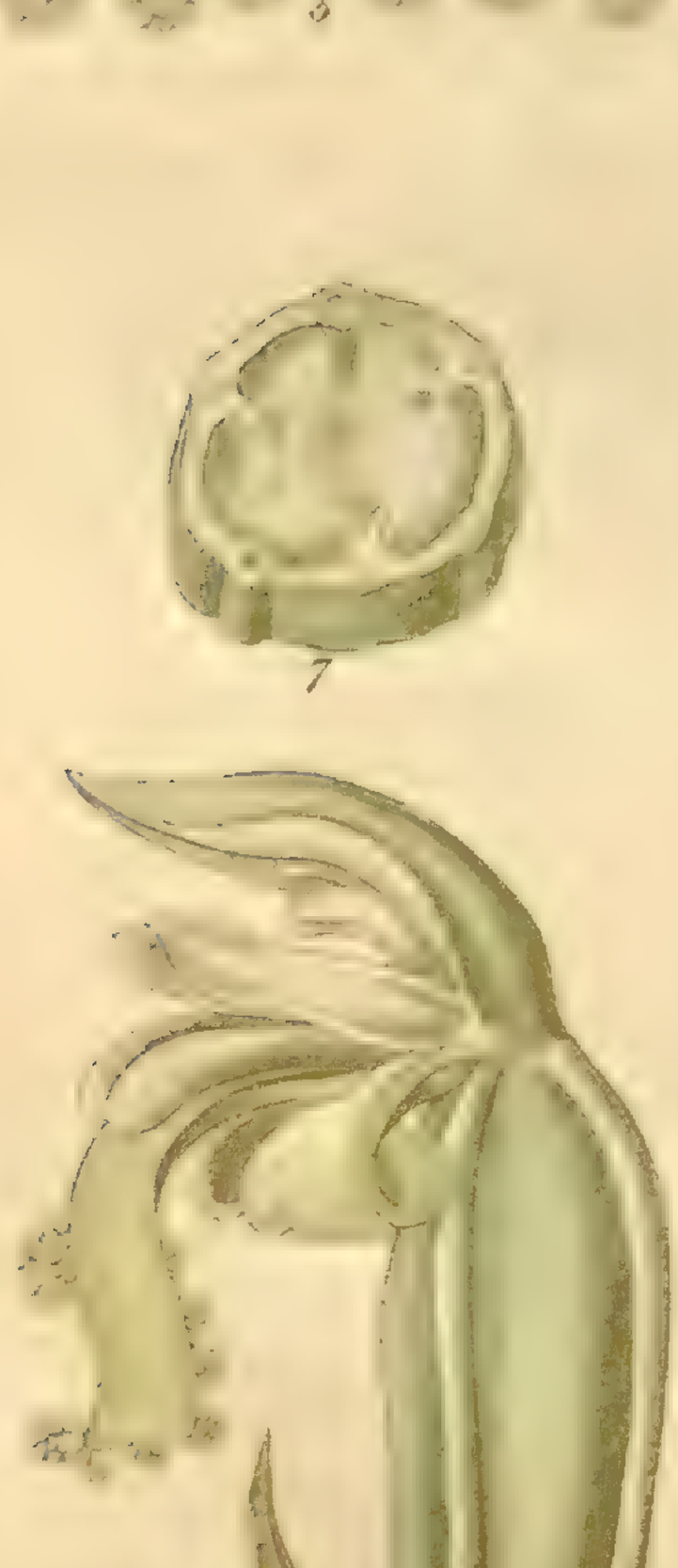
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Pub. by S. Curtis. Glasswood. Essex. Jan.y 1. 1835

MICROTIS MEDIA. MIDDLE-SIZED MICROTIS.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ. § ARETHUSEÆ.)

Generic Character.

Perianthium ringens, foliolis *lateralibus exterioribus* sessilibus, labello suppositis; *interioribus* subsimilibus, adscendentibus. *Labellum* dissimile, oblongum, obtusum, basi callosâ. *Anthera* columnam infundibuliformem posticè terminans, auriculo membranaceo utrinque aucta, (unde nomen.) *Massæ Pollinis* utriusque loculi binæ, pulvereæ, basi affixæ stigmatis apice soluto.—Herbæ *glabræ*. Bulbi *indivisi, nudi*. Folium *caulinum unicum, fistulosum, teres, vaginâ longâ*. Spica *multiflora*. Flores *parvi, virescentes, v. albi, labello indiviso v. bilobo*. *R. Br.*

Specific Character and Synonyms.

MICROTIS *media;* perianthii foliolus inferioribus revolutis oblongis acutis : interioribus linearibus obtusis, labello oblongo-cuneato apice retuso : dimidii superioris disco verrucoso-incrassato marginibus calloso-tuberculatis. *Br.*

MICROTIS media. *Br. Prodr. v.* 1. *p.* 321. *Spreng. Syst. Veget. v.* 3. *p.* 713.

" When Capt. KING returned from New South Wales in 1823, he brought home with him turfs of the CEPHALOTUS of King George's Sound, at which port he had touched in his passage; and that curious vegetable having flowered at Kew, an opportunity was afforded of publishing a coloured figure of it in the Botanical Magazine (t. 3119.) From the sod that contained the Australasian *Pitcher-plant* sprang up, unexpectedly, our present subject, which produced its flowers in 1825, and thus enabled Mr. BAUER, (to whom we are

are indebted for the drawing from which our figure and magnified dissections are copied) to make a sketch of this rare plant—an inhabitant (with the CEPHALOTUS) of swampy grounds on the immediate shores of King George's Sound, where it was originally discovered by Mr. BROWN in 1801. After flowering, the plant died altogether at Kew, and has not since, we believe, been reintroduced to any of our collections." *Allan Cunningham.*

DESCR. Whole plant, in general aspect, very much resembling the M. *parviflora* represented in our last plate, but more than twice the size. The flowers too are extremely similar, and the chief difference is to be found in the lip, which is here larger in proportion to the rest of the flower, and it is singularly wedge-shaped, truncated, and obtuse, even retuse at the extremity :—the disk being moreover furnished with two oblong, warty callosities, and the margin of the lower half and apex, with several globose, tuberculated processes.

Fig. 1. Front, and fig. 2, a side view of the expanded Flower *magnified* eight times in diameter. 3. A front, and 4, a side view of the parts of Fructification and Labellum of the same Flower: *magnified* sixteen times in diameter. 5. Front and side view of the Pollen masses: *magnified* sixteen times in diameter. 6. Pollen grains of the same: *magnified* two hundred times in diameter. 7. A transverse section of the Ovarium: *magnified* eight times in diameter.

W.J.Hood del.

Pub by S.Curtis Hasemood Essex. Jan.1. 1836.

Calandrinia speciosa. Showy-flowered Calandrinia.

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Class and Order.

Polyandria Monogynia.

(Nat. Ord.—Portulaceæ.)

Generic Character.

Calyx persistens bipartitus, sepalis subrotundo-ovatis. *Petala* 3—5 hypogyna aut imo calyci inserta, libera aut imâ basi subconnata, æqualia. *Stam.* 4—15 toro vel basi petalorum inserta, libera, petalis sæpè alterna. *Stylus* 1 brevissimus apice tripartitus, lobulis in stigma clavato-capitatum collectis. *Capsula* oblongo-elliptica 1-locul., 3-valvis, polysperma. *Semina* placentæ centrali funiculis capillaribus adnexa.—Herbæ *succulentæ glabræ Americanæ habitu* Samoli. Folia *integerrima radicalia aut alterna.* Pedicelli 1-*flori axillares aut oppositifolii.* Genus *vix à* Talino *differt. D C.*

Specific Character and Synonym.

Calandrinia *speciosa ;* caule inferne fruticoso, foliis carnosis spathulatis obtusis glaucis, racemis terminalibus laxis simplicibus, calycibus maculatis.

Calandrinia speciosa. *Hort. Eps.*

This plant was received at the Glasgow Botanic Garden, from Mr. Young of Epsom, with the name here given, which we find nowhere recorded, and without any mention of its native country, which, however, is probably the same with that of its near allies lately figured, C. *discolor* (Bot. Mag. t. 3357), and C. *grandiflora* (t. 3369), namely Chili. From both those species it differs in the more shrubby stem, particularly at the base, in the differently shaped leaves, and

and in the size of the flower, which is larger than that of any species with which we are acquainted. With us, it has been hitherto kept in an airy part of the stove, where it flowered in July.

Descr. *Stem* thick and almost woody at the base, resembling that of Sempervivum *arboreum*, and like it marked with the scars of fallen leaves, branched upwards, the *branches* rather short, spreading, green. *Leaves* almost exactly spathulate, obtuse, more or less tapering at the base, patent, fleshy, glaucous. *Peduncle* elongated, terminal, having a few bracteæform leaves, and bearing at the extremity a *raceme* of several *flowers*, of which one only opens at a time, beginning from below; each *pedicel* is accompanied by two broadly ovate, unequal, membranaceous *bractea*, spotted with purple. *Calyx* of two roundish-cordate, concave, pale yellow-green leaves, spotted with purple. *Petals* large, of a brilliant and deep rose-colour. *Stamens* numerous, in several series: *Filaments* and *Anthers* deep purple, the former with the innermost ones pubescent. *Pollen* orange-brown.

Fig. 1. Calyx: *magnified.*

Pub by S. Curtis Glasenwood Essex Jun.1 1835.

Anagallis Monelli; *var.* Willmoreana. Italian Pimpernel, Mr. Willmore's *var.*

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Class and Order.

Pentandria Monogynia.

(Nat. Ord.—Primulaceæ.)

Generic Character.

Cal. laciniis 5 acutis. *Cor.* rotata, laciniis ovatis rotundatis. *Filamenta* basi villosa. *Stigma* globosum. *Capsula* globosa, mucronata, circumscissa. *Semina* numerosa, ovata, subtrigona, scabra; *receptaculo* globuloso.

Specific Character and Synonyms.

Anagallis * *Monelli;* foliis lanceolato-acuminatis trinerviis oppositis verticillisve, caulibus adscendentibus, corollæ (cæruleæ) marginibus minutissimè eroso-crenulatis.

Anagallis Monelli. *Linn. Sp. Pl. p.* 211. *Curt. Bot. Mag. t.* 319. *Roem. et Schult. Syst. Veget. v.* 4. *p.* 117. *Spreng. Syst. Veget. v.* 1. *p.* 570.

Anagallis linifolia. *Linn. Sp. Pl. p.* 212. *Roem. et Schult. v.* 4. *p.* 118.

(β.) corolla vividè purpureo-cærulea. (Tab. nostr. 3380.)

Tab. 319 of our Magazine, represents the usual appearance of Anagallis *Monelli,* with flowers of a rather pale blue. In October of the present year (1834), Mr. Don, of Knyppersley Gardens, near Congleton, Staffordshire, was so obliging as to send me the beautiful variety here represented (accompanied with the drawing by Mr. T. Holland), and which

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* From *αναγελαω, to laugh.* Pliny says the Anagallis excites pleasure; and Dioscorides, that it removes obstructions of the liver, which create sadness.

which had been raised by Mr. WILLMORE, from seeds sent from Madeira. Supposing it to be new, it was communicated to me with the specific name of WILLMOREANA; but however it may excel the A. *Monelli* in brilliancy of colour in the blossom, I think it will on all hands be granted that it can only be considered a variety of that species. It thrives well in a light, rich soil, and continues in flower for a considerable length of time. Its mode of treatment in the garden is well described at t. 319 of this work.

DESCR. *Stems* long and straggling, sharply-angled. *Leaves* opposite or ternate, sometimes quaternate, sessile, broadly-lanceolate, acuminate, three-nerved. *Flowers* numerous. *Peduncles* slender, solitary from the axil of each leaf, single-flowered: the bud drooping. *Calyx-leaves* lanceolate, acuminate. *Corolla* of a brilliant blue-purple above, paler and redder beneath, the eye or centre yellow, the margin minutely and irregularly crenated. *Anthers* yellow: *Filaments* clothed with red hairs.

Fig. 1. Stamen: *magnified.*

Pub. by S. Curtis Glaxenwood Essex. Feb 1. 1836

CEREUS GRANDIFLORUS. LARGE-FLOWERED, or NIGHT-BLOWING CEREUS.

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Class and Order.

ICOSANDRIA MONOGYNIA.

(Nat. Ord.—CACTEÆ.)

Generic Character.

Sepala numerosissima imbricata basi ovario adnata, in tubum elongatum concreta, exteriora breviora calycinalia, media longiora colorata, intima petaliformia. *Stamina* numerosissima cum tubo concreta. *Stylus* filiformis apice multifidus. *Bacca* sepalorum reliquiis areolata tuberculosa aut squamata. *Cotyledones* nullæ ?—Frutices *carnosi elongati axi ligneo internè medullifero donati, angulis verticalibus spinarum fasciculos gerentibus regulariter sulcati.* Anguli *seu* alæ *nunc plurimæ, nunc paucissimæ, rarius dua tantum et tunc rami compresso-alati.* Flores *ampli è spinarum fasciculis aut crenis angulorum orti. D C.*

Specific Character and Synonyms.

CEREUS *grandiflorus ;* radicans diffusus scandens 5—6-angularis, setis 5—6 brevibus vix tomento longioribus. *D C.*

CEREUS grandifiorus. *Mill. Dict. Haw. Syn. Succ. Pl. p.* 184. *De Cand. Prodr. v.* 3. *p.* 468.

CACTUS grandiflorus. *Linn. Sp. Pl. p.* 688. *De Cand. Pl. Grasses, t.* 52. *Spreng. Syst. Veg. v.* 2. *p.* 496.

CEREUS gracilis scandens, &c. *Trew, Ehrh. t.* 31. 22.

The Cactus-family though possessing stems of the rudest and most grotesque forms is surpassed by none in the beauty of its blossoms. While the CEREUS *speciosissimus,* as its name would lead us to expect, produces flowers of a remarkably large size, and possessing very brilliant colours, the

the subject of our present figure yields to no plant in the size, delicacy, and fragrance of its blossoms: nor are these its only peculiarities; it has been aptly described as

> "Queen of the *dark*, whose tender glories fade
> In the gay radiance of the noon-tide hours."

> "That flower, supreme in loveliness, and pure
> As the pale Cynthia's beams, through which unveiled
> It blooms, as if unwilling to endure
> The gaze, by which such beauties are assailed."

In our stoves the season of blossoming is usually the month of August. At ten or eleven at night the flowers are fully unfolded, and by day-light they are closed never more to expand. The closing of the flower may be retarded as Mr. Murray has ascertained, even for a whole day by removing the bud before it is fully open, and putting the cut end into wet sand. Our drawing was made from a plant which had three flowers in perfection at the same hour. The species is a native of the West India Islands, and was, according to Hortus Kewensis, cultivated before 1700, in the Royal Gardens at Hampton Court. The present and all the more beautiful and showy species and varieties of Cactus, are no where perhaps more successfully cultivated than at the extensive gardens and nursery grounds of Mr. Curtis at Glazenwood, Essex; where the curious and grotesque forms of the stem form a singular contrast with the splendour of the blossoms.

Descr. *Stems* creeping and extending to a great length, branched, cylindrical, with from five to seven angles, the angles bearing numerous, small tufts of a woolly substance, intermixed with six to eight short setæ. Copious radicles are thrown out from various parts of the stem, even when the latter does not come in contact with the soil. There is no trace of leaves of any kind. The *flowers* are lateral. The *bud* is at first globose, acute, then clavate, sessile, covered with imbricated scales, bearing long setæ. When fully expanded, the flower is a span across: the *tube* of the *calyx* long, green, the *limb* cup-shaped: the former is composed of the united, imbricated scales above mentioned: the latter is formed of the numerous long, spreading, tawny-orange, upper segments of the calyx, forming a sort of ray, and of an inner series of calyx-segments or petals, which are oblong, broader upwards, nearly erect, and of a pure white colour. *Stamens* numerous, long, at length inclined to one side: *Filaments* white: *Anthers* linear-oblong, yellow. *Style* as long as the stamens: *Stigma* of many rays.

DIPLOPAPPUS INCANUS. HOARY DIPLOPAPPUS.

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Class and Order.

SYNGENESIA SUPERFLUA.

(Nat. Ord.—COMPOSITÆ.)

Generic Character.

Radius uniserialis fæmineus. *Discus* hermaphroditus. *Pappus* biserialis conformis. *Corolla* disci regularis. *Achenium* erostre.—Herbæ *v.* fruticuli *Americani, Asiatici, vel Africani,* foliis *alternis integris; capitulis terminalibus, solitariis, colore varie tinctis. Less.*

Specific Name and Character.

DIPLOPAPPUS *incanus;* foliis linearibus obtusis glauco-incanis semiamplexicaulibus, caulis corymbosi ramulis unifloris, involucri squarrosi foliolis lineari-lanceolatis glandulosis. *Lindl.*

The Genus DIPLOPAPPUS is very nearly allied to ASTER, being distinguished from it scarcely by any thing but the double row of the pappus, whence the name. It includes, however, plants with yellow, as well as purple, flowers, a colour never known in ASTER: hence it embraces CHRYSOPSIS of NUTTALL, and both LESSING and LINDLEY combine with it DIPLOSTEPHIUM of KUNTH and APLOPAPPUS of CASSINI. Few of the Asteroid family are more worthy of cultivation than the present, bearing as it does copious flowers, of peculiarly bright colours, and continuing to blossom in the open border till late in October. Dr. LINDLEY, however, recommends its protection in a frame during winter. It is a native of California, where it was discovered by Mr. DOUGLAS, and was communicated by Mr. N. DON from Knyppersley Gardens, near Congleton.

DESCR.

Descr. Perennial. *Stems* much branched, and, as well as the foliage, every where clothed with short, dense, glaucous pubescence, occasioning a hoary appearance, that suggested the specific name. *Leaves* scattered, about an inch long, linear-lanceolate, entire, patent or recurved, gradually becoming smaller on the ultimate branches, which are terminated by a large single *flower*. *Involucre* almost globose, the *scales* numerous, linear, squarrose, slightly glandular. *Ray* of many florets, and of a bright purple colour. *Disk* deep yellow.

Fig. 1. Floret from the Ray. 2. Ditto from the Disk: *magnified.*

JUSTICIA CARNEA. FLESH-COLOURED JUSTICIA.

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Class and Order.

DIANDRIA MONOGYNIA.

(Nat. Ord.—ACANTHACEÆ.)

Generic Character.

Cal. æqualis, 5-raro 4-partitus. *Cor.* valde irregularis, bilabiata, vel ringens, labio inferiore diviso. *Stamina* 2 antherifera. *Antheræ* biloculares, loculis insertione sæpius inæqualibus. *Filamenta* sterilia nulla vel obsoleta. *Ovarii* loculi dispermi. *Dissepimentum* adnatum. *Semina* retinaculis subtensa. *Br.*

Specific Character and Synonym.

JUSTICIA *carnea;* antherarum loculis parallelis, spicis terminalibus imbricatis multifloris foliis brevioribus, bracteis maximis, labio corollæ superiore lineari emarginato, inferiore recurvo apice obtuso trilobo, foliis ovato-lanceolatis acuminatis subcrenatis longissime petiolatis. *Lindl.*

JUSTICIA carnea. *Lindl. Bot. Reg. t.* 1397.

This very beautiful and most desirable inmate of the stove is a native of Rio Janeiro, and was first described by Dr. LINDLEY from plants introduced by the Rt. Hon. ROBERT GORDON. We have imported it from the same country at the Glasgow Botanic Garden, where the plant, from which our figure was taken, appeared in the autumn of 1834, and we have since received more splendid specimens from Mr. N. DON's garden at Knyppersley, near Congleton, Shropshire.

DESCR.

Descr. *Stem* four to five feet high, branched, the branches four-sided. *Leaves* opposite, ample, on long petioles, ovate, attenuated at the base, sharply acuminated at the extremity, glabrous, entire, reticulated, gradually smaller upwards, where they pass into *bracteas*, which are very numerous, the outer ones ovato-lanceolate : inner ones small and linear. *Corolla* very long and of a beautiful rose-colour, two-lipped ; upper lip erect, entire, lower one revolute, three-toothed. *Anther* deep purple.

Pub by S Curtis Blazenwood Essex Feb.y 1. 1835.

WEDELIA ? AUREA. GOLDEN WEDELIA.

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Class and Order.

SYNGENESIA SUPERFLUA.

(Nat. Ord.—COMPOSITÆ.)

Generic Character.

Radius fæmineus, uniserialis, rarissime nullus. *Achenium* conforme, erostre, angulatum, urceolo foliaceo, hinc inde aristam unam alteramve brevem gerente coronatum, disco epigyno minuto.—Fruticuli *aut* herbæ *Americanæ vel Polynesicæ vel Nepaulenses, magis minusve hispidæ, foliis oppositis, integris aut paucilobatis ; capitulis luteis, terminalibus, solitariis. Less.*

Specific Character and Synonyms.

WEDELIA ? *aurea ;* foliis ellipticis venosis scabris serratis sessilibus, involucri foliolis elliptico-lanceolatis, acheniis compresso-triquetris aristis tribus subspinosis.

WEDELIA aurea. *D. Don, MSS.*

My first knowledge of this plant was from specimens sent to me by the late Mr. BARCLAY, raised from Mexican seeds, with the name here adopted. In August 1824, specimens flowered at Glasgow, which were sent by Mr. CAMERON (formerly gardener to our lamented friend just mentioned) from the Birmingham Botanic Garden, under the name of WEDELIA aurea, D. DON, MSS. The habit is indeed that of WEDELIA, but the *achenia* so little accord with that Genus in their structure, that were it not for the opinion thus expressed of Mr. DON, I should scarcely have ventured to refer it to WEDELIA. With some modification, however, of the Generic Character, it might be included. It is said to have a tuberous root.

DESCR. *Plant* apparently a foot, or a foot and a half high, herbaceous, rounded, scabrous, as is the whole plant, slightly

slightly branched. *Leaves* opposite, the lower ones rarely alternate, elliptical, acute, the upper ones almost acuminate, sessile, serrated, somewhat three-nerved at the base. *Peduncles* terminal, in threes. *Involucre* of rather few subsquarrose scales, of which the outer are elliptical-lanceolate, the inner smaller and narrower, gradually passing into the *paleæ* of the receptacle: these latter are lanceolate, acuminate, carinato-conduplicate. *Flowers* orange-yellow. *Achenium* of the ray triangular, with three short, rigid teeth: that of the disk triangular, compresso-carinate, with three long, equal, subpaleaceous teeth.

Fig. 1. Floret of the Ray. 2 Achenium of ditto. 3. Floret of the Disk with its Bractea. 4. Fruit of ditto: *magnified.*

T. Curtis Glaxonwood Essex Feb.y 1. 1835

Solanum Tweedianum. Mr. Tweedie's Solanum.

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Class and Order.

Pentandria Monogynia.

(Nat. Ord.—Solaneæ.)

Generic Character.

Cal. 5—10 partitus. *Cor.* subrotata, 4—10-fida. *Antheræ* conniventes apice poro gemino dehiscentes. *Bacca* 2, 3, 4-locularis, placentis septo adnatis. *Semina* glabra.

Specific Name and Character.

Solanum *Tweedianum ;* pubescenti-viscidum, caule herbaceo, foliis cordatis basi angulato-dentatis sublonge petiolatis, racemis umbellatis, floribus (inter majores) nutantibus.

Among the numerous species of Solanum which we have received from Mr. Tweedie, gathered near Buenos Ayres, is the present one, of which seeds were sent to the Glasgow Botanic Garden in 1833. It produced its conspicuous and lively flowers in the greenhouse in the month of October: these are of a purplish-white colour, with the projecting stamens of a full orange. The foliage indeed has little to recommend it, being very similar to that of some of the varieties of our S. *nigrum*.

Descr. *Stem* a foot and a half high, erect, rounded, branched, especially upwards, green tinged with purple, clothed with short and fine clammy hairs. *Leaves* alternate, upon footstalks of about the same length, cordate, rather acute, membranaceous, obtuse and somewhat unequal at the base, where, at the sides, they are sinuato-dentate; the rest entire: the whole viscido-pubescent; but less so

than

than the stem. *Peduncles* opposite to the leaves, about two inches long, bearing, in an umbellated *raceme*, five or six rather large drooping *flowers*. *Calyx* 5-fid. *Corolla* rotate, five-cleft, pale purplish-white, yellow at the base. *Stamens* five, of which the anthers are a deep orange colour.

Pub. by S. Curtis, Glazenwood Essex, Feb.y 2 1835.

PHYSOSTEGIA IMBRICATA. IMBRICATED PHYSOSTEGIA.

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Class and Order.

DIDYNAMIA GYMNOSPERMIA.

(Nat. Ord.—LABIATÆ.)

Generic Character.

Calyx per anthesin tubuloso-campanulatus, post anthesin inflato-campanulatus, obscure sub 10-venius, subæqualiter 5-dentatus vel truncatus vix dentatus. *Corolla* tubo longe exserto, intus exannulato, fauce inflata, limbo bilabiato, labio superiore suberecto subconcavo integro vel emarginato, inferiore patente trifido, lobis rotundatis, medio majore emarginato. *Stamina* 4, sub labio superiore adscendentia, subdynama, inferioribus eminentibus. *Antheræ* approximatæ, biloculares, loculis parallelis distinctis nudis. *Stylus* apice subæqualiter bifidus, lobis subulatis apice stigmatiferis. *Achenia* sicca, lævia. *Benth.*

Specific Name and Character.

PHYSOSTEGIA* *imbricata;* caule elato, foliis elliptico-lanceolatis grosse serratis, spicis paniculatis tetragonis floribus erectis dense imbricatis, corollæ labio superiore valde concavo, tubo vix inflato.

The Genus PHYSOSTEGIA is founded upon the DRACOCEPHALUM *Virginianum* of LINN. and Bot. Mag. t. 467, to which species the learned and ingenious author has referred the DRACOCEPHALUM *lancifolium*, MŒNCH, D. *variegatum*, VENT., D. *denticulatum*, AIT. (and Bot. Mag. t. 214), D. *speciosum*,

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* From φυσα, a *bladder*, and στεγω, *to cover*, probably from the swollen character of the calyx which covers the Fruit.

speciosum, Sw., and D. *obovatum*, Ell. To the Genus he has added, but not without some hesitation, a new species from my Herbarium, P. *truncata*, a native of Texas. From all these our plant appears truly distinct, though its affinity is doubtless with D. *Virginianum*. The differences, however striking to the eye are, nevertheless, I regret to say, difficult to be given in a specific character. The plant is much taller, the leaves are broader and more copiously and strongly serrated, the spikes more numerous and crowded, the flowers dense, nearly erect and closely imbricated: the corolla much shorter, less attenuated at the base, and, consequently, apparently less inflated upwards, of a red-purple colour above, almost white beneath, and the upper lip is considerably arched. This (as do the other two species of the Genus,) inhabits Texas, whence roots were sent to the Glasgow, and probably to the other Botanic Gardens in this country, by Mr. Drummond. It flowers during the latter end of summer and autumn, and is a hardy perennial.

Descr. *Root* much creeping beneath the surface of the ground. *Stem* rising quite erect, five to six feet high, four-sided. *Leaves* opposite, the radical ones broadly elliptical, petiolate, upper ones elliptical, lanceolate, sessile, all of them coarsely serrated, especially in the upper half, glabrous, bright green, frequently tinged with purple-brown. *Spikes* numerous pedunculated, from the axils of the upper leaves, which gradually become small, so that the spikes appear paniculated. *Flowers* in four rows, densely imbricated, erect. *Calyx* campanulate, with five distinct, nearly equal teeth. *Bracteas* ovate, shorter than the calyx. *Corolla* red-purple above, pale and almost white below, with a few reddish spots. *Upper lip* very concave: *lower* with three almost equal lobes. *Tube* not strikingly inflated. *Germen* with a yellow linear gland rising above the germen.

Fig. 1. Flower with its Bractea. 2. Corolla seen from the underside. 3. Pistil.

Pub. by S. Curtis Glaxenwood Essex Feb 1 1835

BEGONIA GERANIIFOLIA. GERANIUM-LEAVED BEGONIA.

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Class and Order.

MONŒCIA POLYANDRIA.

(Nat. Ord.—BEGONIACEÆ.)

Generic Character.

MASC. *Cal.* o. *Cor.* polypetala, petalis plerumque 4, inæqualibus. FÆM. *Cal.* o. *Cor.* petala 4—9, plerumque inæqualia. *Styli* 3, bifidi. *Caps.* triquetra, alata, trilocularis, polysperma.

Specific Name and Character.

BEGONIA *geraniifolia;* caulescens glaberrima, foliis æqualiter cordatis acutis acute lobatis inciso-serratis subplicatis nitidissimis fusco-marginatis subtus concoloribus, floribus masculinis 4-petalis, 2 exterioribus rotundatis coloratis interioribus obovatis undulatis (albis).

Numerous as are the species of BEGONIA in Brazil, they appear to be rare, in similar latitudes on the opposite side of the vast continent of South America: and only one seems to be recorded as a native of Peru, B. *octopetala*, L'HERIT., which we have received from Mr. MATHEWS. The present was discovered in the neighbourhood of Lima, and roots brought to the Glasgow Botanic Garden by Mr. M'LEAN, in 1833. In September of the following year, they produced their exceedingly pretty and very delicate red and white flowers, which contrasted well with the glossy and deep green foliage. It is to be regretted that only male flowers have yet been produced, I am therefore unable to characterize the form of the fruit or germen.

DESCR. *Stem* about a foot high, erect, somewhat angular, but very obtusely so, succulent, pale, semipellucid, green,

green, with a slight purplish tinge, branched upwards in a somewhat dichotomous manner. *Branches* rounded. *Leaves* on long, rounded, footstalks, cordate, the sides nearly equal, plaited, cut into many unequal, very acute lobes, and those inciso-serrate, green on both sides, paler beneath, above of a full and very bright and glossy green, the margin red, perfectly glabrous, as is the whole plant : the nerves radiate as it were from the base, without any distinct midrib. At the setting on of the leaf are two large connate, membranaceous bracteæ. *Peduncles* terminal, bearing two or three flowers, which are inclined, drooping while in bud. *Male-flower* of four petals, of which, the outer and larger are almost orbicular and red, the two inner obovate, waved, and white.

Fig. 1. Cluster of Stamens. 2. Anther : *magnified.*

Pub. by S. Curtis. Glaxenwood Essex Mar.t 1.1835

CATASETUM PURUM. SPOTLESS CATASETUM.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Perianthium sæpius globosum, nunc explanatum. *Sepala* et *Petala* subæqualia. *Labellum* crassum, carnosum, nudum, ventricosum vel explanatum, fimbriatum ; sub apice saccatum, obsolete trilobum. *Columna* erecta, aptera, libera, apice utrinque cirrhosa. *Anthera* subbilocularis, antice truncata. *Pollinia 2*, postice biloba vel sulcata, caudicula maxima nuda demum elastice contractili, glandula cartilaginea subquadrata.—Herbæ *terrestres vel epiphytæ, caulibus brevibus fusiformibus vestigiis foliorum vestitis.* Folia *basi vaginantia, plicata.* Scapi *radicales.* Flores *speciosi, racemosi, virides, nunc purpureo-maculati. Lindl.*

Specific Character and Synonyms.

CATASETUM *purum ;* spica multiflora, perianthii foliolis concavis deflexis immaculatis, labello ore contracto integro lateribus denticulatis.

CATASETUM purum. *Nees Pl. Hort. Med. Bonn.* 1824. *Tab. I.*

CATASETUM inapertum. *Hook. Exot. Fl. v. 3. t.* 213. (1826.)

This is one of the best characterized of all the CATASETA, and although introduced to the Liverpool Botanic Garden, as mentioned in the Exotic Flora, more than eight years ago, it appears to be still a rarity in our collections. So far as I know, it is confined to two of the gardens of Liverpool, which rank high in the Orchideous department, namely, the Botanic Garden and that of CHARLES HORSFALL, Esq.,

Esq., who also imported it from Brazil. From both these establishments, where it flowers during the winter months, it has been obligingly communicated to me. At the time I described this plant in the Exotic Flora, I was not aware of its having been published two years previously by Dr. Nees von Esenbeck in the work above quoted. I now gladly adopt his name. His plant differs in no respect from ours, save in the fewer and narrower leaves. I may here observe, that the flowers of the spike in the accompanying figure (taken from Mr. Shepherd's specimen) being considerably advanced, the segments of the perianth are on that account more deflexed than in an earlier stage of perfection, and their margin reflexed. Our figure 1, from Mr. Horsfall's plant, represents the more perfect form of the flower.

Descr. The *bulbs* and *foliage* of this plant are similar to those of the other species of the Genus: and the distinguishing marks of the *flowers* are better understood by a reference to the figure than by words. They are, perhaps, the smallest of the concave-lipped species, and of an uniform pale yellow-green colour, the inside of the lip only excepted, which is of a purplish-brown colour. The *lip* itself is superior, remarkably contracted at the mouth, the margin at the extremity destitute of teeth, the sides denticulate. The *sepals* are ovate, concave, and as well as the petals directed downwards, so as only to enclose the lower part of the labellum with their concave bases, in age they are still more deflected, and the margins turned outwards.

Fig. 1. Flower. 2. Flower with the Sepals bent back in age. 3. Back view of the same. 4. Column, from which the Anther-case, fig. 5, is removed. 6. Pollen-mass: all, but fig. 1—3, *magnified.*

Published by S. T. Jackman & Co. Mar.ch 1 1835

RUELLIA ELEGANS. NEAT BLUE-FLOWERED RUELLIA.

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—ACANTHACEÆ.)

Generic Character.

Calyx 5-partitus æqualis. *Corolla* infundibuliformis, limbo 5-fido subæquali patente. *Antheræ* 2-loculares. *Capsula* polysperma, dissepimento adnato.

Specific Name and Character.

RUELLIA * *elegans;* herbacea, pubescenti-hirsuta, foliis ovato-acuminatis grosse serratis longe petiolatis, floribus in ramis terminalibus subsolitariis pauci-bracteatis, calycibus ciliatis.

This very pretty species of RUELLIA is cultivated in the stove of the Glasgow Botanic Garden, having been raised from seeds sent from the East Indies. Its bright blue blossoms continue during great part of the summer, and render it an acceptable plant to our collections. It is probably described in Professor NEES VON ESENBECK's elaborate memoir, entitled "Acanthaceæ Indiæ Orientalis," and given in Dr. WALLICH's "Plantæ Asiaticæ Rariores;" but without the fruit, I am unable satisfactorily to refer it to its proper Genus among the numerous ones there characterized. I wish it therefore to be considered a RUELLIA of ROXBURGH and most other authors.

DESCR. The *root* is probably annual. The *stem* erect, slender, hairy with patent hairs, erect, branched; the *branches*

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* Named after JOHN RUELLE, a French Botanical writer, who lived in the sixteenth century.

branches opposite and axillary, simple. *Leaves* opposite, pubescent, ovato-acuminate, coarsely serrated, tapering at the base gradually into a footstalk, nearly equal to the leaf in length. The *leaves* at the extremity of the branches appear suddenly to become ovato-lanceolate, lax, sessile *bracteas*, enclosing one to three flowers. *Calyx* of five deep, linear-lanceolate, ciliated segments, not half so long as the *tube* of the *corolla*. *Corolla* hypocrateriform. *Tube* curved, white, purplish upwards, where it is somewhat inflated. *Limb* very bright blue, of five nearly equal, emarginate lobes. *Stamens* four; two with hairy *filaments*, the other two small, and apparently abortive, all included. *Germen* oblong, tapering into a slender *Style*, included within the flower: *Stigma* of two, very unequal, sharp-pointed lobes.

Fig. 1. Flower. 2. Calyx laid open, including the Pistil. 3. Stamens: *magnified.*

Mrs M. Young del.

Pub. by S. Curtis, Glazenwood Essex, Mar 1 1836.

Sophora tomentosa, β. Downy Sophora, *variety.*

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Class and Order.

Decandria Monogynia.

(Nat. Ord.—Leguminosæ.)

Generic Character.

Calyx 5-dentatus, basi campanulata aut subattenuata. *Pet.* carinalia sæpius apice concreta. *Legumen* moniliforme apterum, polyspermum.—Arbores, frutices *aut* herbæ, *foliis impari-pinnatis sepius exstipulatis, racemis terminalibus simplicibus paniculatisve. D C.*

Specific Character and Synonyms.

Sophora**tomentosa;* fruticosa, subsericeo-canescenti-pubescens, foliolis suboppositis 7—9 jugis cum impari ovalibus obtusis coriaceis reticulatis, racemis erectis elongatis terminalibus demum lateralibus, bracteis subulatis deciduis, calycibus inflatis dentibus obsoletis, staminibus deciduis basi incrassatis pubescentibus.

Sophora tomentosa. *Linn. Sp. Pl. p.* 533. *D C. Prodr. v.* 2. *p.* 95. *Spreng. Syst.* 2. *p.* 346.

(β.) foliis ramulisque junioribus canescentibus, demum nudiusculis lucidis. *Tab. nostr.* 3390.

Sophora occidentalis. *Linn. Sp. Pl. p.* 533.

The shining, dark green, handsome foliage of this plant, contrasting with its bright yellow spike-like panicles of flowers, render it a very ornamental shrub ; but in Madeira, (where our description was made by Mr. Lowe, and our drawing

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* From its Arab name, *Sophera.*

drawing by Miss M. Young, for the blossoms have we believe never been produced in Britain,) it is singularly liable to be infested by a species of caterpillar, which, at intervals, absolutely swarms upon it, stripping it of all its leaves and beauty. The foliage has a fetid, subbituminous smell, like that of Psoralea *Americana*, L., or P. *bituminosa*, L.

Raised from Brazilian seeds by Mrs. Penfold, of the Achada, flowering chiefly in May or June ; the seeds ripening in September and October. Miller says that in Jamaica, of which it is a native, the other more hoary variety, *α*, Sophora *tomentosa*, L., is called *Sea-side Pigeon Pea.* This was made by Linnæus a distinct species from the smoother plant here figured (S. *occidentalis*, L.) : but they have been long united by Mr. Brown, under the name of S. *tomentosa.*

Descr. An upright, evergreen, bushy *shrub*, in Madeira about five feet high, conspicuous for its fine dark-green, shining foliage, somewhat resembling that of the *Locust-tree*, or *Carob-tree* (Ceratonia *Siliqua*, L.). *Branches* round, grayish, straight, erect, and rather simple, or but distantly subdivided : while young clothed with dense, adpressed, very short and close *setæ* rather than hairs ; giving them a somewhat hoary or mealy gray appearance. *Petiole* subquadrangular, compressed, or with the sides flattened and broader than above, where it is strongly but narrowly channelled ; hoary, like the young leaves and branches. *Leaflets* from six to nine, but generally in eight pairs, with an odd terminal one ; on short, flattened, pale flesh-coloured, mostly opposite, downy *petiolules ;* their edges slightly revolute : they are from one and a half to two inches long, and from an inch and a quarter to an inch and a half broad, diminishing in size from the second or third pair to the terminal odd one, broadly oval, varying from roundish to elliptic, obtuse, though with often an inconspicuous, short point, coriaceous ; shining, and ultimately nearly smooth ; finely reticulated as if minutely punctate, and of a dark, glossy green above ; beneath pale, with the reticulating veins darker, very fine, but distinct and regular, presenting a beautiful appearance through the lens : both sides sparingly sprinkled, even when old, with extremely short and minute adpressed hairs. Often by abortion the uppermost pair or two of leaflets is imperfect, and variously combined with the terminal odd one : and all the leaflets have a tendency to become more or less alternate. *Flowers* much like

like those of *Spanish Broom* (SPARTIUM *junceum*, L.) but rather paler, bright lemon-yellow, middle-sized, scentless, in erect, leafless *panicles* from six inches to a foot long, truly lateral and axillary, but at first appearing terminal, by their pushing aside out of its direction in a geniculate manner the young shoot, which by being also adnate to the petiole of the uppermost developed leaf, resembles rather a side-branch coming out at the base of the panicle. *Bracteas* small, linear-subulate, adpresso-pubescent, about half the length of the pedicels when the flowers expand. *Pedicels* a quarter to one-third of an inch long, round, adpresso-pubescent, erecto-patent, jointed close beneath the calyx. This last is in the bud oblong, with five shallow, but distinct, equal teeth; in the flower large, inflated, cup-shaped, slightly gibbous above; the base thrust in *(intrusus)* like the bottom of a bottle: teeth broad, very shallow and inconspicuous: the whole hoary-pubescent, pale greenish-yellow, and full of honey. *Standard* reflexed, uniform, bright yellow. *Keel* and *wings* of equal length, nearly as long, and the same uniform colour as the standard. *Stamens* ten; their *filaments* nearly white, smooth upwards, but pubescent and thickened at the base; perfectly distinct and free throughout. *Anthers* pale brown. *Style* simple, with the *stigma* truncate, smooth, green, about the length of the stamens. *Ovary* linear, silky, containing many *ovules*. *Pod* five or six inches long, curved, drooping, indehiscent, moniliform; the *seeds* forming globose, bead-like knots, pale yellowish, finally dark brown or blackish, hoary with very fine cinereous pubescence: frequently several seeds are abortive, and then the pod between the remainder is strangulated and reduced almost to a thread. *Seeds* from five or six to ten or twelve, the size of small peas, subglobose or subcordate, a little pointed both at top and bottom, with a faint, indistinct groove down the back, quite smooth and shining, tawny brown or dark fawn colour, darker about the *hilum*, which is a small elliptic cavity with dark edges.

Fig. 1. Ripe Legume. 2. Seed: *nat. size.*

W. Fitch del.

Pub. by S. Curtis Glazenwood, Essex. Mar.1 1835.

Swan Sc

PENTSTEMON RICHARDSONII. DR. RICHARDSON'S PENTSTEMON.

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—SCROPHULARINÆ.)

Generic Character.

Cal. pentaphyllus aut quinquepartitus, bractea solitaria distante. *Corolla* ventricosa, bilabiata. *Stamina* didynama, rudimento quinti filiformi sæpius barbato. *Antheræ* sejunctæ, sæpius glabræ. *Capsula* ovata, bilocularis, bivalvis, polysperma. *Semina* angulata.—Herbæ *v.* suffrutices, *Americanæ, vel Orientali-Asiaticæ.* Folia *lævia, acuminata, sæpius serrata.* Flores *paniculato-racemosi, purpurei, rosei, albidive. Lindl.*

Specific Character and Synonyms.

PENTSTEMON *Richardsonii;* caule herbaceo, foliis sessilibus pinnatifidis, calycibus glanduloso-pubescentibus, laciniis ovatis acutis, corollæ labio superiore bilobo, inferiore trilobo transverso, pedunculis racemosis 2—3-floris. *Lindl.*

PENTSTEMON Richardsonii. *Douglas, Journ., &c. ined. Lindl. Bot. Reg. t.* 1121.

A hardy perennial, now become frequent in our gardens though of comparatively recent introduction. It is a native of the Columbia and its tributary streams, where it was discovered by Mr. DOUGLAS, who named it in compliment to Dr. RICHARDSON, the friend and companion of Sir JOHN FRANKLIN. It flowers during the greater part of the summer months, and the blossoms are succeeded by numerous seed-vessels.

DESCR.

Descr. *Stem* erect, or nearly so, much branched, the *branches* slender, slightly downy. *Leaves* ovato-acuminate, very obscurely pinnatifid, pubescent, the segments narrow, acuminated, often toothed. The numerous, short, lateral branches bear two or three handsome flowers. *Calyx* in five deep, lanceolate, rather than ovate, segments, which are acuminated and spreading. *Corolla* purple, the *tube* much swollen, ventricose: *upper-lip* two-lobed, erect, lower three-lobed, standing forward. *Barren filament* linear, compressed, yellow-green above, white below, bearing near the extremity a few scattered white hairs.

Fig. 1. Barren Filament: *magnified.*

ŒNOTHERA SINUATA. SCOLLOP-LEAVED EVENING PRIMROSE.

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Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—ONAGRARIÆ.)

Generic Character.

Calyx 4-fidus, tubulosus. *Petala* 4, calyci inserta. *Capsula* 4-locularis, 4-valvis, infera. *Semina* comosa.

Specific Character and Synonyms.

ŒNOTHERA *sinuata;* decumbens molliter pubescens, foliis oblongo-lanceolatis sinuato-pinnatifidis incisisve, floribus axillaribus parvis (luteis), sepalis versus apicem unguiculatis, fructibus cylindraceo-tetragonis subarcuato-incurvis pilosis.

ŒNOTHERA sinuata. *Mich. Fl. Am. v.* 1. *p.* 224. *Pursh, Fl. Am. v.* 1. *p.* 261. *Elliott, Carol. v.* 1. *p.* 443. *Spreng. Syst. Veget. v.* 2. *p.* 227. *De Cand. Prodr. v.* 3. *p.* 48. *Torrey, Fl. of Un. St. v.* 1. *p.* 388. *Hort. Kew. ed.* 2. *v.* 2. *t.* 343.

(β.) *minima;* caule humile simplice unifloro, foliis integris. *Nutt. Gen. Am. v.* 1. *p.* 245. *Torrey, Fl. of Un. St. v.* 1. *p.* 389.

ŒNOTHERA minima. *Pursh, Fl. Am. v.* 1. *p.* 262. *t.* 15.

ŒNOTHERA *sinuata* seems to have been introduced to our gardens, according to Hortus Kewensis, in 1770, by M. RICHARD. Yet it has never found a place in any periodical botanical work, nor do I think it is by any means a general plant in our collections. American authors give it as an inhabitant of New Jersey, Virginia, Carolina, and Georgia. Seeds have been sent from Texas by

by Mr. Drummond in 1833, from which plants were raised that flowered in the open border in the Glasgow Botanic Garden in September of the following year. The Œ. *minima*, Ph. is now generally allowed to be a starved state of the present species.

Descr. *Stems* decumbent, branched, 1—2 feet long; the *branches* round, soft with pubescence as is the whole plant, often tinged with purple. *Leaves* sessile, oblongo-lanceolate, acute, sinuato-pinnatifid, subincised. *Flowers* axillary, solitary, shorter than the leaf. *Segments* of the calyx scarcely shorter than the corolla. *Petals* obcordate, yellow. *Fruit* (immature) linear, 4-sided, hairy.

Pub.d by Curtis Clarence wood Esse x Nov.1 1836

ONCIDIUM TRIQUETRUM. TRIQUETROUS-LEAVED ONCIDIUM.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Labellum explanatum lobatum basi tuberculatum. *Petala* patentia (2 antica nunc connata). *Columna* alata. *Massæ pollinis* 2, postice bilobæ; medio affixæ processu communi stigmatis. *Br.*

Specific Character and Synonyms.

ONCIDIUM *triquetrum;* petalis acutis anticis connatis, labelli lobo medio subrotundo indiviso, scapo racemoso, foliis triquetris. *Br.*

ONCIDIUM triquetrum. *Br. in Ait. Hort. Kew. ed. 2. v. 5. p. 216. Spreng. Syst. Veget. v. 3. p. 723.*

CYMBIDIUM triquetrum. *Sw. Fl. Ind. Occ. p. 1475.*

Although introduced from Jamaica to the Royal Gardens of Kew by Rear Admiral BLIGH, so long ago as the year 1793, a figure of this beautiful plant has never appeared in any work, from which it may perhaps be inferred, that the species was soon lost to our gardens. It has, however, been again introduced by CHARLES HORSFALL, Esq. from the same country, and in his collection we had the pleasure of seeing it in the autumn of the present year. The plant had been liberally divided, and a portion sent to the gardens of Wentworth, where our figure was made from it in full flower in October 1834.

DESCR. *Plant* destitute of bulb. The *leaves* arise immediately from the root, are few in number, distichous, four to

to six inches long, cartilaginous, triquetrous, but laterally compressed, grooved above, very acute; the colour a deep full green, with a reddish margin. *Scape* from the centre of these leaves, and about equal to them in length, slender, curved, purplish, bearing a few *bracteas*, and terminated by a *raceme* of ten to twelve, handsome, but moderately-sized *flowers*. *Calyx* of two opposite, broadly-lanceolate, purplish-green *leaves*, the lower one formed of two, combined and bidentate. *Petals* white, tinged with pale green, and variously spotted with purple; the two lateral ones ovate, the lower one, or *labellum*, cordato-ovate, the base on each side spreading into two rounded lobes: the central base or disk being occupied by a large, fleshy, orange-coloured gland, which is confluent with the base of the column. *Column* short, with a broad wing above on each side the *stigma*. *Anther-case* ovate, imperfectly two-celled. *Pollen-masses* ovato-globose, attached to a slender rather long pedicel with a gland at its base.

Fig. 1. Back view of a Flower. 2. Labellum and Column. 3. Front view of the Column from which the Anther has been removed. 4. Anther-Case. 5. Pollen-masses:—*magnified.*

t Fisch Mar.1 1830

Acacia undulæfolia. Waved-leaved Variable Acacia.

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Class and Order.

Polygamia Monœcia.

(Nat. Ord.—Leguminosæ.)

Generic Character.

Flores polygami. *Cal.* 4—5-dentatus. *Pet.* 4—5, nunc libera, nunc in corollam 4—5-fidam coalita. *Stam.* numero varia 10—200. *Legumen* continuum exsuccum bivalve.—Frutices *aut* arbores, *habitu et foliatione valdè variæ.* Spinæ *stipulares sparsæ aut nullæ. D C.*

Specific Character and Synonyms.

Acacia *undulæfolia;* stipulis minutis acuminatis deciduis, phyllodiis latè ellipticis ovatisve obliquis interdum subæquilateris undulatis planiusculisve acuminatis leviter parallelo-venosis glabris, mucrone attenuato incurvato terminatis, margine antico prope basin uniglanduloso, capitulis solitariis geminisve axillaribus pedunculatis, pedunculis glabriusculis vel parcè pilosis phyllodium superantibus, ramulis teretiusculis diffusè dependulis cano-pilosis, floribus quinquefidis, petalis erectis apice uncinatis, stylo staminibus ferè duplo longiore. *Allan Cunn.*

Acacia undulæfolia. *Allan Cunningham MSS.* (1822.) *G. Don's Syst. of Gard. v. 2. p.* 404. *n.* 41. *Lodd. Bot. Cab. t.* 1544.

That considerable portion of our globe, now more generally called by geographers Australia, by whom it has been justly regarded as a fifth continent, exceeding in extent full three-fourths of Europe, has long been characterized as a land of anomalies, furnishing many extraordinary incongruous features, not simply in its physical constitution, geographically and geologically considered, but in the character of its aboriginal inhabitants, and especially in its animal and *vegetable* products. On the characteristic features and geographical range of the *latter,* in that country,

Mr.

Mr. Brown has, some years since, furnished us with many highly interesting remarks, in the appendix to the voyage of Captain Flinders; where he has particularly noticed those Genera of the Australian Flora, Eucalyptus and Acacia, as being each, so numerous in species, and so extensively scattered over the whole country, as to form striking peculiarities of its vegetation—their respective aggregates moreover, if taken together, and considered with respect to the mass of vegetable matter they contain, (calculated from the size, as well as the number of individuals), exhibiting a proportion of the whole, perhaps almost *equal* to all the other plants of that continent.

That two Genera, agreeing truly in a part of their economy, although of very different orders, should thus largely contribute towards that peculiar character of the Australian forest-vegetation, which has long since met the observation of Botanists, is of itself remarkable; but there are two other striking facts connected with the forests of New Holland, that are highly interesting to physiologists, which all travellers in those regions have remarked, but on which, few have reasoned. These are the position of their leaves on the branch, and the gray or sombre aspect they give to the landscape. Neither, have escaped the scrutinizing observation of Mr. Brown; for, regarding the former, he has observed, that in those Genera, the leaves are vertical—in other words, instead of presenting their surface towards the stem, the margin is opposed to it, so that both surfaces have the same relation to light: and in respect to the absence of vegetable lustre in the wilds of that continent, that philosophical botanist has, by microscopic investigation ascertained, that it is to be attributed to the equal existence of cutaneous glands (pores, or *stomata* of the *epidermis* of most authors) on both surfaces of the leaves.

Why that vertical economy, which so uniformly takes place in the aphyllous Acaciæ, in the Eucalypti generally, and in species of certain Genera of Proteaceæ—a family also greatly dispersed, and presenting remarkable modifications in Australia—should thus prevail in that country, and that both paginæ should be alike furnished with cutaneous glands, it may be difficult to explain; although it does indeed almost seem obvious, that, that deviation from the usual position of leaves generally, which takes place in those leading Genera in Australia, as well as the *uniformity*, and perhaps greater adaptation of both surfaces (by some peculiar absorbent organization) to imbibe atmospheric moisture at night, have a reference to that known constitutional dryness of the country,

country, to which those plants are indigenous. Whatever their functions may be, Mr. Brown is of opinion, that cutaneous glands more frequently occur on both surfaces of the leaves of plants on that continent, than in any other part of the world.

Of the Genus Acacia, nearly one hundred species were known to that able and discriminating Botanist in 1814; of which, by far the greater number belonged to the section, containing such as are, in almost every individual, wholly destitute of true leaves, in the adult state: whose petioles therefore, greatly developed, put on the appearance, and doubtless perform all the requisite functions of leaves. Since that period, great has been the accession of new species to our living collections, and especially to the Herbarium; for, in the latter, are now to be enumerated full two hundred species, indigenous to Australia, of almost every form of *phyllodium* and habit—many indeed, exhibiting, in the modes of inflorescence, a beauty, that renders them greatly to be desired in the living state. The species of which we now give a figure, is another of the discoveries of Allan Cunningham in the interior of New South Wales, to which this work has so often referred. It was discovered in 1822, clothing rocky hills near Bathurst; and was subsequently observed occupying arid spots in the country lying N. W. from that settlement, at elevations exceeding three thousand feet above the level of the sea. Although an inhabitant of districts, in which the temperature in the winter months, is often reduced to the freezing point, and where even snow remains upon the surface, for a short period, in seasons of unusual severity, for the latitude of that colony, it nevertheless requires, in this country, the shelter of a greenhouse in winter, not having the constitution of a compatriot, and indeed companion of its native hills, Eucalyptus *pulverulenta* (Sims), which bears our climate without distress, when placed against a wall in a southern aspect. First raised from seeds received at Kew in 1823, and an acknowledgment of our thanks is due to Mr. Aiton, for the specimens transmitted us, from which our drawing was made. This comparatively rare plant, which neither ripens its pods with us, nor is by any means readily propagated otherwise, is a very distinct species from any of the Australian portion of the Genus, enumerated by De Candolle; it approaches however nearest to A. *anceps* of his Prodromus.

Descr. A *shrub* seldom exceeding a height of four feet, and in its native country of variable, irregular habit, and much branched; the branchlets being of a dark colour, crowded with axillary flowers to their very

very extremities, and densely clothed with short, cinereous hair. In the cultivated state, the branchlets are brown, subangular, pilose, and of spreading, dependent habit. *Phyllodia* copious, alternate, often an inch long; in some instances but a little more in length than in breadth, elliptical or ovate; as frequently equilateral as oblique, especially in the wild specimens: often of very flexuose surface with undulated, thickened margins, or almost entirely plane, acuminate, with an attenuated, curved mucro; the *upper margin* more wavy than the lower, and near the base furnished with a rather prominent oval gland; smooth, having several faintly-marked primary veins, diverging from the midrib at an angle of forty-five degrees, and running parallel to each other. *Flowers* bright-yellow, formed in solitary, rarely geminate capitula, and projecting beyond the phyllodia, on peduncles from the axillæ. *Peduncles* either nearly smooth, or but thinly interspersed with hairs. *Calyx* small, five-toothed, smooth. *Corolla* five-cleft, each segment erect, margins somewhat incurved, apex hooked. *Stamens* numerous, about half the length of the *style*. *Legume* (in the ripe state) dark-brown, two to three inches long, and one broad, compressed, obtuse, slightly curved, subgibbous, the outline often repand or subsinuate, with a thickened margin; smooth, and traversed by parallel, ultimately branched veins, one-celled, long-peduncled. *Seeds* four to eight, seldom more, flattish, obtusely elliptical, very smooth, brown-black. *Umbilical funicle* simple, cymbiform.

Of the same section as, and closely akin to our plant, our Herbarium furnishes several, as yet unpublished species; of which, two more nearly allied, have been defined by Mr. CUNNINGHAM, as follows:

A. *sertiformis;* glaucescens glabra, stipulis acutis persistentibus, phyllodiis obliquè subrotundis perlatè ovatisve acuminatis manifestè parallelovenosis, venulis anastomozantibus, acumine incurvato innocuo, dimidio superiore minore ad basin uniglanduloso, capitulis solitariis axillaribus pedunculatis; pedunculo phyllodium æquante, (nunc duplo longiore,) ramis teretibus elongatis incurvatis deflexisve, floribus quinquefidis, petalis suberectis, stylo staminibus paulò longiore.

HAB. in Novæ Cambriæ Australis parte interiore: in desertis ad margines occidentales planitiei peramplæ Liverpool. *All. Cunn.* 1825. Florens lecta mense Maio.

OBS. *Frutex* erectus, pulchellus, quinque—sexpedalis. *Rami* teretes, læves, picei; primò erectiusculi, elongati, viminei; dein (versùs apices) inflexi, vel declinati, quandoque in curvamina sertiformia propemodum dispositi. *Phyllodia* copiosa, uncialia, patentia. *Capitula* lutea, constanter ad axillas solitaria. *Calycis dentes* glabri.

A. *piligera;* hirta, pilis laxis patentibus, stipulis acuminatis persistentibus, phyllodiis subobliquè ellipticis obovatisve planiusculis cuspidatis, obtusisve cum acumine, mucrone attenuato subulato sphacelato, margine antico prope basin uniglanduloso, capitulis pedunculatis solitariis subgeminisve, pedunculis phyllodio longioribus, ramulis teretibus virgatis strictis, floribus quinquefidis, petalis erectis, staminibus dimidium styli vix quantibus.

HAB. in Nova Cambria Australi: in cacuminibus apricis præruptis montium ad flumen Hunter. *All. Cunn.* 1825. Aprili, Maio floret.

OBS. *Frutex* strictus, elegans, orgyalis et ultra. *Rami* erecti, virgati, laxiùs foliosi. *Phyllodiorum* paginæ plùs minùs planiusculæ, pilis perrarò conspersæ. *Capitula* florum aurea. *Dentes calycis* ciliati.

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Maxillaria Deppii. Deppe's Maxillaria.

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Class and Order.

Gynandria Monandria.

(Nat. Ord.—Orchideæ.)

Generic Character.

Perianthium patens, resupinatum. *Labellum* cum processu unguiformi columnæ articulatum, trilobum. *Foliola* lateralia *exteriora* basibus cum processu columnæ connata. *Pollinia* 4, basibus connata, glandulosa, (vel 2, pedicellata, pedicello basi glanduloso.)—Herbæ *parasiticæ, bulbosæ, Americæ meridionalis.* Racemi *(vel* scapi *uniflori) radicales. Lindl.*

Specific Character and Synonym.

Maxillaria *Deppii;* calyce patente, foliolis oblongo-obtusis maculatis, corolla porrecta, petalis lateralibus obovatis (albidis), labello trilobo (flavo) purpureo-maculato, lobis lateralibus incurvis, intermedio ovato-acuminato undulato reflexo, scapis radicalibus, bulbo ovato compresso apice subtriphyllo.

Maxillaria Deppii. *Lodd. Bot. Cab. p.* 1612.

This very fine species of *Maxillaria* was received by Mr. Loddiges, from Mr. Deppe, who gathered it near Xalapa, in New Spain. Our drawing was made in October, 1834, at Wentworth, the seat of Earl Fitzwilliam, where, under the able management of Mr. Cooper, the Orchideous plants are cultivated with a degree of success which, if it even be equalled, can never be surpassed by other Horticulturists: so that, greatly as my expectations had been raised, I must confess that the sight of this collection, whether the vigorous growth and beauty of the foliage, or the number of splendid species blossoming at one time be considered, far exceeded

exceeded my warmest anticipations. The present was one among the rarer species which I was glad to have the opportunity of figuring from the growing plant.

Descr. *Bulbs* broadly ovate or rotundate, compressed, furrowed, clustered, sometimes arising from the base of a leaf; but the *leaves* are generally produced, three or four together, from the extremity of the bulb. They are broadly elliptico-lanceolate, striated and waved. *Scapes* radical, single-flowered, partially clothed with red-brown, sheathing scales. *Flowers* large, handsome. *Calyx* of three ovato-elliptical spreading *leaves*, the two lateral ones combined below, and projecting into an obtuse but distinct *spur*: their colour is dingy green, spotted with purple. *Petals* standing forward: two lateral ones white, obovate, concave; lower one or *lip* bright-yellow, with a few purplish spots, three-lobed, its two lateral lobes incurved, the intermediate one reflexed, ovato-acuminate, the margins waved: in the disk of the labellum, towards the base, is a yellow *gland*. *Column* elongated, white, marked with purplish lines. *Anther* hemisphærical.

Fig. 1. Lip, *nat. size*. 2. Column:—*magnified*.

3306

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Pub. by S. Curtis April 1 1838

PLAGIANTHUS? SIDOIDES. SIDA-LIKE PLAGIANTHUS.

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Class and Order.

MONADELPHIA DECANDRIA.

(Nat. Ord.—EUPHORBIACEÆ? BOMBACEÆ. *D C.*)

Generic Character.

Flores hermaphroditi. *Calyx* subhemisphæricus, 5-dentatus. *Petala* 5, ovalia, basi cum tubo staminum unita. *Stamina* 10—12; *filamenta* in tubum cylindraceum unita. *Pistillum* solitariuin. *Germen* ovatum uni- bi-ovulatum, ovulis suspensis. *Stylus* crassiusculus. *Stigma* magnum, bilobum, hinc decurrens, papillosum. *Capsula* subdrupacea, mono-dicocca, apiculata, indehiscens? *Cocculi* monospermi. *Semen* pendens. *Albumen* carnosum. *Embryo* immersus, curvatus: *Radicula* cylindracea, ad hilum seminis versa: *Cotyledones* majusculæ, planæ, subfoliaceæ, longitudinaliter undulatæ.—Frutex *parvus, virgatus.* Folia *linearia, fasciculata, 3-nervia.* Flores *subsolitarii, parvi, breviter pedunculati, flavescentes.*

Specific Name and Character.

PLAGIANTHUS? *sidoides;* foliis sparsis lanceolatis serratis rugosis subtus cano-pubescentibus, floribus glomeratis.

A *shrub* of no great beauty; with the habit of some of the Australian SIDAS, but with a structure of the flower entirely that of the New Zealand PLAGIANTHUS, so that notwithstanding a considerable difference in habit, I dare not, without a knowledge of the fruit, separate it from that Genus. It is a native of Van Diemen's Land; and seeds were sent from thence to the Glasgow Botanic Garden, by the late Mr. LAWRENCE; and it produced its small and unobtrusive flowers in the Greenhouse, in September, 1834.

Descr. *Shrub* two to three feet high, slightly branched, downy above. *Leaves* scattered, shortly petiolate, lanceolate, wrinkled with the reticulated veins, strongly serrated, downy, canescently-woolly beneath. *Flowers* axillary, glomerated, small. *Calyx* bell-shaped, monophyllous, five-toothed, hoary with down. *Corolla* of five spathulate, ciliated *petals*, a little longer than the calyx, combined by their claws. *Filaments* united into a cylindrical, downy *tube* and confluent at the base with the claws of the petals. *Anthers* about ten, apparently one-celled, pale yellow. *Germen* ovate, green, attenuated into a rather thick, white *style*, equal in length with the stamens. *Stigma* protruded, bipartite.

Fig. 1. Flower. 2. Corolla, including the Stamens and Pistil. 3. Column of Stamens and Pistil. 4. Pistil :—*magnified.*

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HABENARIA GOODYEROIDES. GOODYERA-LIKE HABENARIA.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ. § OPHRYDEÆ.)

Generic Character.

Cor. ringens. *Labellum* basi subtus calcaratum. *Glandulæ pollinis* nudæ, distinctæ (loculis pedicellorum adnatis vel solutis distinctis.) *Br.*

Specific Character and Synonyms.

HABENARIA *goodyeroides;* caule elongato, foliis ellipticolanceolatis, spica multiflora, labello subintegro petalisque obtusis (albidis), calcare globoso saccato, foliolis calycinis ovato-acuminatis (herbaceis).

HABENARIA goodyeroides. *Don, Prodr. Fl. Nepal. p.* 25. *Spreng. Syst. Veget. v.* 3. *p.* 690.

This is the other species of HABENARIA from Bombay, mentioned at t. 3374, when speaking of H. *gigantea,* as communicated by JOSEPH NIMMO, Esq., to our Botanical Garden, where it flowered in December. It is a rare and interesting plant, though greatly inferior in beauty to the H. *gigantea.* It appears entirely to agree with the H. *goodyeroides* of Mr. DON, a native of Nepal. So that, on the continent of India, it seems to have an extensive range.

DESCR. *Stem* a foot in height, erect, simple, rounded, leafy. *Leaves* patent, remote, gradually larger upwards, where they are more crowded, elliptical-lanceolate, rather acute, striated, waved, of a satiny-green lustre. *Peduncle* terminal, sheathed with erect, lanceolate *bracteas,* and bearing a rather long and densely crowded *spike* of small *flowers,* intermixed with subulate bracteas, which are rather longer

longer than the flower. *Perianth* with the segments erect, nearly equal in length. *Calyx* of three ovato-acuminate, greenish leaves. *Petals* white, two lateral ones ovate, very obtuse: *lower one* or *labellum* ovate, with the sides incurved, the apex reflexed, the base prolonged into an inflated, globose, yellowish-green *spur*, very much shorter than the linear-oblong, twisted *germen*. *Column* very short. *Anther* large in proportion to the size of the flower, yellow, having on each side a clavate, erect *gland* or abortive anther.

Fig. 1. Flower. 2. Lip with its Spur. 3. Column. 4. Pollen mass: *magnified.*

W.J.H. del.t

CLERODENDRON HASTATUM. HALBERD-LEAVED CLERODENDRON.

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—VERBENACEÆ.)

Generic Character.

Cal. 5-fidus (nunc 5-dentatus). *Cor.* tubo cylindrico; *limbo* 5-partito, patente, laciniis subæqualibus. *Stam.* juxta faucem inserta, exserta, adscendentia: antherarum loculis parallelis. *Bacca* pyrenis 4, monospermis. *Br.*

Specific Character and Synonyms.

CLERODENDRON *hastatum;* foliis oppositis subhastato-cordatis 5-lobis acuminatis, ramis pedunculisque villosis, panicula decussata dichotoma ramosa, calyce foliaceo acuto, tubo corollæ longissimo filiformi. *Wall. in Bot. Reg.*

CLERODENDRON hastatum (*sphalmate* C. sagittatum). *Wall. Cat. Herb. Ind. num.* 1786. *Lindl. Bot. Reg. t.* 1307.

SIPHONANTHUS hastata. *Roxb. Hort. Beng. p.* 46.

A valuable acquisition to our stoves, for which we are indebted to Dr. WALLICH, who introduced it by seeds produced in the Botanical Garden of Calcutta. It is a native of Sylhet, where it was discovered by Mr. SMITH, who sent it to Dr. ROXBURGH, in 1811. Our drawing was made at Wentworth Gardens, in October, 1834: but the flowers were so long, and the panicle and foliage so large, that not even a quarto plate would have done justice to the subject. The blossoms are delightfully fragrant.

DESCR. A *shrub* from five to six feet in height, branching mostly at the top; *branches* spreading, square with obtuse angles. *Leaves* opposite, a span and more long, halberd-shaped,

berd-shaped, very acute, downy all over, the two lateral lobes often again divided: the upper leaves among the panicles are small and ovate or lanceolate. *Panicle* large, spreading, pedunculate, arising from the axils of the upper leaves. *Peduncles* and *branches* purplish-brown, downy. *Calyx* inflated; with five connivent lobes, of a yellow-green colour, the segments purple, and there is a band at the bottom of the calyx of the same colour: the whole glabrous, but viscid. *Corolla* white or greenish-white: the *tube* exceedingly long and slender, curved, downy with glandular hairs; *limb* of five spreading, waved or tortuous segments. *Filaments* and *style* exserted, purple. *Anthers* purple-black, as is the *pollen*.

Fig. 1. Section of the Calyx, showing the Germen.

3309

Pub. by S. Curtis Glasenwood, Kent Apr 1 1835

Swan sc

EURYCLES CUNNINGHAMII. SMALL-FLOWERED EURYCLES, or BRISBANE LILY.

Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—AMARYLLIDEÆ.)

Generic Character.

Perianthium hypocrateriforme, limbo sexpartito. *Stamina* faucialia, filamentis dilatatis coronam mentientibus, utrinque unidentatis; *antheræ* versatiles. *Ovarium* 3-loculare; ovulis geminis collateralibus appensis. *Capsula. Semina* testâ carnosâ. *Lindl.*

Radix *tunicato-bulbosa.* Scapus *pedalis et infra, erectus, subteres.* Folia *plura,* (2—5) *petiolata, subrotunda, ovato-orbiculata, s. oblonga, brevi-acuminata, basi plùs minùs cordata, concentrice nervoso-costata, ferè* Hemerocallidi japonicæ, *lætè viridia.* Involucrum 2—3-*phyllum.* Umbella 4—12-*flora.* Flores *tubulosi, hexandri, albi.* Tubus *subcylindricus.* Filamenta *basi dilatatâ, complanatâ, in tubum dentatum proximè contigua, adhuc plerumque distincta.* Stylus *erectus.* Stigma *simplex, rarò divisum.* Ovarii *loculi bi-rarius tri-spermi.* Semina *bulbiformia.*

Specific Character and Synonyms.

EURYCLES *Cunninghamii;* umbellâ 4—6-florâ, perianthii laciniis ovato-oblongis planis, erecto-patulis, staminum dentibus lateralibus subulatis, intermedio subæqualibus.

EURYCLES Cunninghamii. *Ait. MSS. apud Hort. Reg. Kew. Loud. Hort. Brit. Suppl. p.* 588. *Lindl. in Bot. Reg. t.* 1506.

It was, we believe, Mr. BROWN who first suggested, that PANCRATIUM *amboinense* of LINNÆUS, differed from the other species

species of the Genus, in the structure of the ovarium and corona—the cells of the former being furnished with two seeds, and the tube-like form of the latter, cut down nearly to its base, into almost six distinct segments. Two years afterwards, viz. in 1812, Mr. Salisbury proposed, in a paper that appeared in the transactions of the Horticultural Society of London, to remove that Amboyna Lily, from its then co-ordinates, to a new Genus; to which, without any definition of character, he gave the title of Eurycles * :—a Genus, (thus submitted for adoption by future botanical writers) at that time, limited to the solitary species; the Crinum *nervosum* of L'Heritier, who had probably relied upon the accuracy of the figure of Rumph. (in the sixth volume of the Herbarium Amboinense), being considered by botanists identical with it.

Since that period, however, two very distinct species, both natives of New South Wales, and of Mr. Cunningham's discovery, have been added to the Genus. Of these, the one here figured was originally gathered in the year 1824, on the banks of the Brisbane River, at Moreton Bay; where it was observed growing in great abundance beneath the shade of the Araucariæ of the forests of that almost tropical region, and where, urged by the rains, which fall on that coast in the summer months, it frequently puts forth its flower-scape before the leaves appear.

In botanical affinity, Eurycles approaches nearest to Calostemma of Mr. Brown, a Genus exclusively Australian, and now—rather a remarkable coincidence—also comprising three species; of which, one (C. *album*, an inhabitant of the north coast of that continent) has the elliptical nerved leaves, so characteristic of the individuals of the Genus of our present subject.

Descr. *Bulbs* nearly round, tunicated, about the size of a walnut, hazel-brown, with a palish-green apex. *Leaves* two to five, long-petioled, elliptical or oblong, acuminate, rather cordate at the base, smooth on both sides, strong-nerved; *nerves* curved and parallel. *Scape* erect, about a foot high, bearing an umbel of from four to six flowers, within an *involucrum* of two or three leaves, of unequal size and always shorter than the flowers themselves, when expanded.

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* Derived from εὐρὺς, *broad*, and κλείω *to close up*: in reference to the dilated bases of the filaments, which may be said, partially to close up, the orifice of the tube of the flower.

panded. *Flowers* superior, tubular, pedicellated, white; *segments* of the *perianth* ovate-oblong, or oblong-lanceolate, rather plane, erect-patent, bluntish, somewhat shorter than the tube. *Stamens* six, inserted into the orifice of the tube, shorter than the limb of the perianth : *filaments* dilated at the base, approaching closely, so as to appear in the form of a corona, with alternate sterile teeth, (occasionally bilobed) not quite the length of those bearing the anthers. *Style* erect, almost twice the length of the stamens, but somewhat shorter than the segments of the perianth. *Stigma* distinctly three-lobed.

The following may serve as distinctive Characters of the species at present known; and to each is added, its botanical history.

1. E. *sylvestris;* (meliùs *amboinensis,*) umbellâ multiflorâ, (circiter 10—12) perianthii laciniis spathulato-lanceolatis parum undulatis patentibus, staminum dentibus lateralibus introrsum curvatis, intermedio tri- quadruplo brevioribus.

Narcissus amboinensis, &c. *Commel. Hort. v.* 1. *p.* 77. *t.* 39.
Cæpa sylvestris. *Rumph. Amb. v.* 6. *p.* 160. *t.* 70. *f.* 1.
Pancratium amboinense. *Linn. Willd. Sp. Pl.* 2. *p.* 46. *Blume Enumer. Pl. Jav.* 1. *p.* 25. *Spreng. Syst. Veget.* 2. *p.* 46. *Bot. Mag. t.* 1419. *Redouté Lil. t.* 384.
Pancratium nervifolium. *Salisb. Paradis. t.* 84.
Crinum nervosum. *L'Herit. Sert. Angl. p.* 8. *Persoon Syn.* 1. *p.* 352. *Willd. Sp. Pl.* 2. *p.* 47.
Amaryllis rotundifolia. *Lamarck Encycl.* 1. *p.* 124.
Proiphys amboinensis. *Herbert in Bot. Mag. App.* (1821) *p.* 42.
Eurycles sylvestris. *Salisb. in Hort. Soc. Lond. v.* 1. *p.* 337. *Schult. Syst. Veget.* 7. *p.* 909.
Eurycles amboinensis. *Loud. Encycl. Pl. p.* 242.

Hab. In insulâ Amboyna ad oras sylvarum. *G. E. Rumph;* atque in ins. Java, in sylvis vastis montium Panangounan, sub tegmine Tectonæ, abundè. 1793. *J. J. Labillardiére.*

Obs. Flores triunciales et ultra. Tubus laciniis parum longior. *Bases* coronæformes staminum semisexfidæ. *Stamina* stylum æquantia, perianthio breviora. *Stigma* leviter subtrilobum.

In the present day, rather a rare plant in our collections; although an old inhabitant of our gardens, having been cultivated at Chelsea by Miller, who probably obtained it from Amsterdam, to which once celebrated Botanic Garden, it was introduced direct from Java, in the days of the Commelines, almost a century and a half since.

2. E. *australis;* (meliùs *Kingii,*) umbellâ suboctoflorâ, perianthii laciniis lineari-lanceolatis acutiusculis undulatis erecto-patentibus, staminum denticulis lateralibus acutis erectis, intermedio sexies brevioribus.

Pancratium australasicum. *Ker in Bot. Reg. t.* 715.

Pancratium

Pancratium australe. *Spreng. Syst. Veget.* 2. *p.* 47.
Eurycles australis. *Schult. Syst. Veget.* 7. *p.* 911.
Eurycles australasica. *Loud. Encycl. Pl. p.* 242.
Hab. in Novæ Camb. Australis oræ æquinoctialis, insulâ depressâ calcariâ Cairncross, in grad. 11 lat. australis, ubi, in locis umbrosis prope littus, parcè crescit. 1820. *Allan Cunningham.* Visa mense Augusto, absque floribus; sed verosimiliter Decembri, Januario floret.

Nunquam versus interiorem partem continentis australasicæ, lecta fuit, secundum Ker.

Obs. Nimis affinis E. *sylvestri*, sed prorsum minor. *Flores* vix tripollicares. *Bases* coronæform. staminum omninò sexpartitæ. *Filamenta* perianthio breviora. *Stigma* simplex.

Bulbs of this very rare species were received at Kew in 1821, to which garden alone, in Europe, were they sent from New South Wales. In the course of the following year they flowered in the stove; and the plant appearing soon afterwards in a nursery-garden where it also produced flowers, a figure was published of it in the Botanical Register, where it was described, as a species closely allied to Pancratium *amboinense*, but differing in having a corona "six-parted to the very bottom." As the plant, under the culture it met with, produced no offsets from the roots, and was not to be propagated otherwise, it was, at the fourth year after its introduction, lost to Britain—the bulbs which progressively decreased in size, becoming eventually dried up. Nor are they very likely to be reintroduced to our Collections, for the plant has not been found in any part of New South Wales, hitherto visited, as inaccurately stated in the work just referred to, but was observed sparingly, in the voyage of Captain P. P. King, on the small, uninhabited, sandy island above named, at which, there is no inducement for passing ships to touch, since it furnishes but little firewood, and no fresh water.

3. E. *Cunninghamii;* (supra tab. 3399.)

Hab. in Novâ Cambriâ Australi: in sylvis densis subhumidis, ad ripas fluminis Brisbane, Moreton Bay, versus tropicum. 1824. *Allan Cunningham.* Floret Decembri, Januario.

Obs. Præcedenti proxima; at flores umbellæ omninò minores et pauciores. *Perianthium* sesquiunciale. *Stylus* staminibus longior, atque perianthii ferè longitudine. *Stigma* trilobum. *(Allan Cunningham.)*

Pub by S. Curtis. Glazenwood Essex April 1835.

PTEROSTYLIS CONCINNA. NEAT PTEROSTYLIS.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Perianthium ringens tetraphyllum, foliolo inferiore bifido (è duobus infra cohærentibus conflato). *Labellum* unguiculatum, subinclusum. *Lamina* basi appendiculatâ v. gibbosâ. *Ungue* infrà labio inferiore connato. *Columna* basi galeâ connata, apice alata. *Anthera* terminalis, persistens, loculis approximatis. *Massæ pollinis* in singulo loculo binæ, compressæ, pulvereæ. *Stigma* medio columnæ adnatum.—Herbæ *terrestres, glabræ.* Bulbi *nudi, indivisi, caudicem descendentem radiciformem terminantes.* Folia *nunc radicalia stellata, nervosa, membranacea, scapo bracteato aphyllo; nunc caulina alterna, radicalibus nullis.* Flores *solitarii rariùsve racemosi, ochroleuci, sæpiùs majusculi. Br.*

DIV. I. Appendix *apice diviso, penicillata.* Folia *radicalia stellata.* Scapus *bracteatus, aphyllus. Br.*

Specific Character and Synonyms.

PTEROSTYLIS *concinna;* foliis radicalibus stellatis, scapo medio unibracteato, labelli laminâ emarginatâ inclusâ columnam æquante. *Br.*

PTEROSTYLIS concinna. *Br. Prodr. Fl. Nov. Holl. v.* 1. *p.* 326. *Hooker Bot. Journ. v.* 1. *p.* 274. *t.* 136. *Spreng. Syst. Veget. v.* 3. *p.* 715.

This graceful little Orchideous plant, like the majority of the species of this remarkable Genus, is a native of the vicinity

nity of Port Jackson, where it was discovered by Mr. Brown, and introduced to the Royal Gardens at Kew by Mr. Allan Cunningham in 1828. I am indebted to W. T. Aiton, Esq. for the drawing here represented, taken from a plant which flowered in that rich establishment in 1830. This is rather more luxuriant than the native specimens in our Herbarium, which we possess from Mr. Brown himself (gathered in 1803,) Mr. Richard Cunningham, and Dr. Sieber. By this last-named botanist, it is incorrectly called P. *acuminata*.

Descr. The *root* is a descending fibre, about the thickness of small twine, bearing at the extremity two small, pea-shaped *tubers*. Sometimes a second fibre is thrown out, four to five inches long, in a horizontal direction, and slightly thickened at the apex. *Leaves* radical, ovate. *Scape* four to six inches high, slender, erect in our cultivated plant, bearing three to four sheathing *bracteas*. *Flower* erect, beautifully varied with purple-brown, green and white, *galea* acute. *Lower sepal* with two much attenuated segments, longer than the galea. *Labellum* strap-shaped, emarginate, purple *appendage;* with a glandular tuft of hairs at its extremity. *Column* about as long as the *lip*, green ; *wings* white, with two filiform appendages at the top on each side the anther.

Fig. 1. Front view of a Flower. 2. Back view of ditto. 3. Side view of the Column and Lip. 4. Front view of the upper part of the Column:—*magnified.*

Pub. by S. Curtis Glazenwood Essex Apr 1 1835

PTEROSTYLIS ACUMINATA. ACUMINATED PTEROSTYLIS.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Perianthium ringens, tetraphyllum, foliolo inferiore bifido, (è duobus infra cohærentibus conflato). *Labellum* unguiculatum, subinclusum. *Lamina* basi appendiculatâ v. gibbosâ. *Ungue* infrà labio inferiore connato. *Columna* basi galeâ connata, apice alata. *Anthera* terminalis, persistens, loculis approximatis. *Massæ pollinis* in singulo loculo binæ, compressæ, pulvereæ. *Stigma* medio columnæ adnatum.—Herbæ *terrestres, glabræ.* Bulbi *nudi, indivisi, caudicem descendentem radiciformem terminantes.* Folia *nunc radicalia stellata, nervosa, membranacea, scapo bracteato aphyllo; nunc caulina alterna, radicalibus nullis.* Flores *solitarii rariùsve racemosi, ochroleuci, sæpiùs majusculi. Br.*

DIV. I. Appendix *apice diviso, penicillato.* Folia *radicalia stellata.* Scapus *bracteatus, aphyllus. Br.*

Specific Character and Synonyms.

PTEROSTYLIS *acuminata ;* foliis radicalibus stellatis, bracteâ scapi præter floralem unicâ, flore erectiusculo, labio inferiore parúm longiore, galeâ acuminatâ, labelli laminâ integrâ : apice attenuatâ exsertâ columnam superante. *Br.*

PTEROSTYLIS acuminata. *Br. Prodr. Fl. Nov. Holl. v.* 1. *p.* 326. *Spreng. Syst. Veget. v.* 3. *p.* 715.

This is the fifth species of the singular Australian Genus PTEROSTYLIS, which we have had the privilege of figuring in the

the Botanical Magazine from the Royal Gardens at Kew, by the obliging attentions of Mr. Aiton. It was introduced by Mr. Allan Cunningham, from the neighbourhood of Port Jackson, in 1827, and our drawing was made there in April of last year, 1834. The flower is so large in proportion to the size of the plant, as to render this one of the most striking of the species yet known in cultivation.

Descr. *Root,* two small *tubers* at the end of a branching fibre. *Leaves* few, three to four, radical, oblong-ovate, waved at the margin, reticulate. *Scape* a span high, in native specimens bearing only one *bractea,* in our plant, as in the cultivated state of P. *concinna,* three or four, closely embracing the scape. *Flowers* solitary, terminal, nearly erect, but much curved, large, greenish-white. *Galea* much acuminated. *Lower sepal* with two acuminated, divaricating segments, about as long as the galea. *Labellum* linear-oblong, acuminated, bearing at its base a pedicellated tuft of glandular hairs (the appendage). *Column* scarcely so long as the lip: its *wings* small, white, with two setiform appendages at the top.

Fig. 1. Front view of a Flower. 2. Back view of ditto. 3. Side view of the Labellum and Column. 4. Front view of the Column. 5. Back view of the Labellum: *nat. size.*

3
1
2
4

ZYGOPETALUM MACKAII; β crinitum. MR. MACKAY'S ZYGOPETALUM; hairy-lipped *var.*

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Perianthium explanatum, sepalis petalisque adscendentibus, subæqualibus, cum ungue producto columnæ connatis. *Labellum* muticum, indivisum, patens, ungue ascendente: cristâ magnâ transversâ carnosâ. *Columna* brevis, arcuata, semiteres. *Anthera* subbilocularis. *Pollinia* 2, bipartibilia, in glandulam transversam subsessilia.—Herbæ *terrestres (?), subacaules; foliis plicatis patentibus.* Flores *speciosi, labello cæruleo. Lindl.*

Specific Character and Synonyms.

ZYGOPETALUM *Mackaii;* foliis lorato-lanceolatis striatis apice recurvis racemo brevioribus, sepalis petalisque oblongo-lanceolatis acutis, labello obcordato pubescente callo baseos crassissimo retrorsum bilobo. *Lindl.*
ZYGOPETALUM Mackaii. *Hook. Bot. Mag. t.* 2748. *Lodd. Bot. Cab. t.* 1664. *Lindl. Gen. et Sp. Orchid. p.* 187.
EULOPHIA Mackaiana. *Lindl. Bot. Reg. t.* 1433.
(β.) *crinitum,* venis labelli magis pilosis. *Lindl. Gen. et Sp. Orchid. p.* 187. (Tab. nostr. tab. 3402.)
ZYGOPETALUM crinitum. *Lodd. Bot. Cab. t.* 1687.

At tab. 2748 we gave a full description of our ZYGOPETALUM *Mackaii.* Like many other of the splendid tropical *Orchideæ,* this seems liable to considerable variation, and among other kinds cultivated in the rich collection at Wentworth, Mr. COOPER pointed out to me the present, flowering

flowering in great perfection, in October, 1834. It is a native of Brazil, and appears identical with the Z. *crinitum* of Mr. Loddiges, which Professor Lindley has, I think with justice, considered a variety of Z. *Mackaii*. Indeed the Eulophia *Mackaiana* of the Bot. Register (t. 1433) appears to be intermediate between the true Z. *Mackaii* and our present plant; which latter is distinguished from both those just mentioned by the more acute anther-case, by the entire (not emarginate) lip, conspicuously hairy at the base, and marked with purplish-red interrupted and nearly parallel lines. Professor Lindley considers the species of this Genus to be "terrestrial," to us they appear to be epiphytes.

Fig. 1. Front view of the Column, terminated by the Anther. 2. Apex of the Column, from which the Anther-case is removed, as represented, as seen on the underside, fig. 3. 4. Side view of the Lip: *slightly magnified.*

Pub by S. Curtis Glazenwood Esso May 1.1855.

NEOTTIA CALCARATA. SPURRED NEOTTIA.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Cor. ringens : petalis exterioribus anticis labello imberbi suppositis ; interioribus conniventibus. *Columna* aptera. *Pollen* farinaceum.

Specific Character and Synonyms.

NEOTTIA *calcarata ;* labello acuminato denticulato basi decurrente, cornu apice libero tereti-subulato curvo, petalis lanceolato-acuminatissimis, foliis ellipticis acutis longe petiolatis.

NEOTTIA calcarata. *Sw. Fl. Ind. Occ. v. 3. p.* 1413.

STENORRHYNCHOS calcaratum. *"Rich." Spreng. Syst. Veget. v. 3. p.* 710.

From the rich collection of CHARLES HORSFIELD, Esq. of Liverpool, where it was introduced from Jamaica. SWARTZ describes it as a native of St. Domingo : so that it is probably to be met with in several of the West Indian Islands ; yet no author seems to have been acquainted with it except SWARTZ.

DESCR. *Leaves* three or four, all arising from a few large, brownish, oblong scales on the top of the *root ;* three or four inches in length, elliptical, slightly waved, very acute, about three-nerved, of a deep yellowish-green on the upper side, with a peculiarly satiny lustre, beneath paler and somewhat glaucous ; the base tapers into a stout *petiole,* about equal in length with the blade of the leaf. *Scape* eight or ten inches high, pale, reddish, terete, bearing three or four sheathing, acuminated, pale green bracteas,

teas, and at the extremity, a spike of six to seven distantly-placed, pale, yellowish-green *flowers*. *Petals* linear and very much acuminated, the three outer spreading, the two inner combined with the upper one and forming a *galea*. *Lip* long, much acuminated and reflexed, serrated or denticulate at the margin, the lower half entire, canaliculated, the base running down so as to form a lengthened *spur*, of which the lower part only is combined with the *germen*, the rest free, tereti-subulate, curved; about as long as the germen. *Column* short. *Stigma* with a long, linear apex. *Anther* acuminated, the cells yellow. *Bracteas* subulato-lanceolate, acuminate.

Fig. 1. Bracteæ and Flower from which the Petals are removed, showing the Spur, Column, and Lip: *magnified.*

W. H. del.ᵗ Pub.ᵈ by S. Curtis Blazerwood Esser May 1 1835. Sw.m Sc

GOLDFUSSIA ANISOPHYLLA. UNEQUAL-LEAVED GOLDFUSSIA.

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—ACANTHACEÆ.)

Generic Character.

Cal. 5-partitus, subæqualis. *Corolla* infundibuliformis, limbo quinquefido obtuso æquali. *Stamina* inclusa, didynama, humiliora sæpe brevissima reflexa. *Antheræ* mutantes; locelli in connectivo uncinato glanduloso obliqui, ovati, membranacei. *Stigma* simplex, subulatum, altero latere crenatum. *Capsula* sexangularis, bivalvis, a dissepimento solubilis, loculis infernis dispermis. *Semina* discoidea, retinaculis subtensa.—Inflorescentia: flores *pauci in capitulo, bibracteolati, bracteis deciduis; rarius spicati, spica post delapsas bracteas magis elongati.* Capitula *pedunculata, pedunculo simplici vel diviso.* Frutices, *foliis penninerviis curvinerviis, nervis omnibus apicem patentibus, nec vero attingentibus. Nees.*

Specific Character and Synonyms.

GOLDFUSSIA* *anisophylla;* foliis oblongis caudato-acuminatis, opposito minimo. *Nees.*

GOLDFUSSIA anisophylla. *Nees, in Pl. Asiat. Rar. v. 3. p. 88.*

RUELLIA anisophylla. *Hort. Bot. Calc. Hook. Ex. Fl. t. 191. Wall. Cat. n. 2349. a. b. Spreng. Syst. Veget. cur. post. p. 236.*

This beautiful plant was found by FRANCIS DE SYLVA, at Silhet, and through Dr. WALLICH introduced to European gardens,

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* Named by Dr. NEES VON ESENBECK, in honour of Dr. GOLDFUSS, Professor of Nat. History at Bonn upon the Rhine.

gardens, where it is a great ornament to our stoves, flowering during the winter and spring months. The flowers are handsome, but in a measure concealed by the distichous foliage, under which they seem to insinuate themselves, though they originate in the upper axis of the leaf. The leaves themselves have a striking peculiarity in exhibiting the costa and nerves prominent on the *upper* side of the leaf, and sunk into the substance of the leaf (the costa excepted, which is slightly prominent) on the *under side*. On each side of the nerve, however, on the upper side, the parenchyme forms a closely-placed elevated line.

Descr. *Plant* one and a half to two feet high, much branched, glabrous; *branches* zigzag, patent or even, recurved, compressed, slightly winged. *Leaves* distichous, opposite, though appearing alternate by the abortion of one of every pair alternately, broadly lanceolate, acuminato-caudate, serrated, above dark-green, with prominent nerves, beneath pale, with sunken nerves: when held between the eye and the light, copious small pellucid lines, generally lying in a transverse direction, are visible. *Petiole* short, flat above, keeled below, slightly winged at the margin. Abortive leaf very small, lanceolate, acuminate, with an obscure central nerve, sometimes altogether wanting. *Peduncles* axillary, but inclined downwards, so that they are in a measure concealed under the spreading leaves and branches. *Peduncles* from the axil of the fully-formed leaf; rarely one arises from the opposite side also; an inch or an inch and a half long, bearing a terminal, sessile glomerule, and sometimes one or two lateral ones of two to three flowers, and these subtended by about as many small *bracteas*. *Calyx* very small, of five deep linear-lanceolate, erect, equal, pale yellow-green, erect, segments, clothed with glandular hairs. *Corolla* funnel-shaped, the throat slightly compressed, the limb a little irregular, within hairy, the whole purplish-blue, prettily variegated and veined with pale marks of the same colour, and red and yellow. *Anthers* and *filaments* white. *Style* clavato-acuminate.

Pub by S. Curtis Glazenwood. Essex May 1 1835.

CHILODIA SCUTELLARIOIDES. SCUTELLARIA-LIKE CHILODIA.

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Class and Order.

DIDYNAMIA GYMNOSPERMIA.

(Nat. Ord.—LABIATÆ.)

Generic Character.

Calyx campanulatus, tubo brevi 13-striato, bilabiatus, labio superiore integerrimo, inferiore emarginato, fauce intus nuda. *Corolla* tubo amplo brevi, limbo campanulato-subbilabiato, labio superiore erecto subplano emarginato-bifido, inferiore trifido, lobo medio majore bifido, (aut emarginato,) omnibus planis, patentibus. *Stamina* 4, subæqualia, tubo breviora. *Filamenta* glabra nuda. *Antheræ* biloculares, loculis parallelis glabris nudis muticis. *Stylus* apice breviter bifidus, lobis subæqualibus, apice stigmatiferis.—Frutex *habitu* Prostantheræ. *Benth.*

Specific Name and Synonyms.

CHILODIA* *scutellarioides. Brown, Prodr. Fl. Nov. Holl. v.* 1. *p.* 507. *Spreng. Syst. Veget. v.* 2. *p.* 703. *Benth. Gen. et Spec. Labiat. p.* 447. *Loud. Hort. Brit. Suppl. p.* 585.

CHILODIA australis. *Loud. Hort. Brit. Suppl. p.* 585.

PROSTANTHERA empetrifolia. *Sieb. Herb. Nov. Holl. n.* 187. fide exempl. in Herb. D. LAMBERT.

The LABIATÆ hitherto observed in New Holland, consist of nineteen genera; and while some of them, as SALVIA and TEUCRIUM, (abounding in species, and occupying an extensive geographic range in other portions of the globe,) are barely represented in that vast country, and PRUNELLA and LYCOPUS, furnishing each a solitary species in New South

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* From χεῖλος, a *lip*, and ὀδὲς, a *tooth*; the lower lip of the calyx being divided; in which respect it differs from PROSTANTHERA of LABILLARDIERE, the little-known CRYPHIA of Mr. BROWN, and the Linnean Genus SCUTELLARIA, to all which it is very closely allied.

South Wales, which appear, under some modification by climate, identical with the common British individuals of those genera; others, forming a very remarkable and well-defined section of the order, are absolutely limited to Australia, where their numbers, now amounting to nearly fifty species, present, both in structure and habit, another example of those peculiar forms of Australian vegetation, to which we have so frequently taken occasion to advert.

To this latter groupe of Genera—the PROSTANTHEREÆ of MR. BENTHAM—belong WESTRINGIA and CHILODIA, the Genus of our present plant; of the former we have afforded some illustration, in folios 3307 and 3308 of this work, and for the opportunity now afforded us of giving a figure of the latter, we are again indebted to the liberality of Mr. AITON.

CHILODIA was founded by Mr. BROWN, on the form of the calyx, which is similar to that of SCUTELLARIA in its earlier state, but it differs from that Linnean Genus, in its lower lip being emarginate, or even more or less bifid, and in the presence of bracteæ near its base; and on the structure of the anthers, which are not furnished with spur-like appendages as in PROSTANTHERA, a Genus with which, however, it perfectly accords, in the form of the corolla, and in habit.

A shrub of New South Wales, of rare occurrence in that colony; inhabiting barren forests in the vicinity of the Nepean River, whence seeds were communicated to Kew Gardens, in 1828.

Forming a handsome hardy greenhouse plant, and flowering freely at various seasons, it has proved itself an interesting acquisition to our collections. It is not, however, easy of propagation; for it has hitherto ripened its seeds very sparingly, and cuttings do not readily strike root.

DESCR. A *shrub*, in its wild state, from two to three feet high, very erect, with numerous, long, upright, slender branches, more or less strigose; under cultivation, of more diffuse and bushy growth; the branchlets opposite, terete, interspersed sparingly with hairs. *Leaves* opposite, half an inch in length, erect-patent, inserted remotely on the branch, subsessile, linear, or linear-lanceolate, acute, apex often curved, margin subrevolute, smooth, and dark-green above, whitish on the under side. *Flowers* solitary, upon peduncles half the length of the leaf, axillary, violet-blue. *Peduncle* with two linear, subulate bracteas near the apex. *Calyx* campanulate, *tube* short, longitudinally striated, smooth, having minute, crystalline bodies interspersed on the surface, bilabiate; *upper lip* entire, bent upwards, margin smooth, base arched, villous; *lower lip* emarginate, or bifid, margin finely ciliated. *Tube* of the *corolla* short, inflated, a little longer than the calyx; *limb* campanulate-bilabiate, slightly pubescent on the outside; *upper lip* bifid, reflexed; *lower lip* divided into three lobes, spreading, the middle segment somewhat larger, retuse, and occasionally emarginate. *Stamens* four, nearly of the same length, purple, inserted almost at the base of the tube of the flower, and about half its length. *Filaments* short, smooth; *anthers* two-celled, brown; *cells* parallel, smooth, ecalcarate, or without spur-like processes. *Style* exserted. *Stigma* bifid, lobes unequal. *Germen* four-lobed. *All. Cunningham.*

Fig. 1. Side-view, and fig. 2 front-view of the Calyx. 3 and 4 Corolla. 5. Corolla laid open to show the Stamens.

Saxifraga ligulata. Fringe-leaved Saxifrage.

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Class and Order.

Decandria Digynia.

(Nat. Ord.—Saxifrageæ.)

Generic Character.

Cal. 5-sepalus, sepalis plùs minùs inter se et sæpè cum ovario coalitis. *Petala* 5 rariter irregularia, breviter unguiculata integra. *Stamina* 10, 5 sepalis, 5 petalis opposita; *antheræ* biloculares. *Capsula* calyci adnata vel libera; *carpella* 2 sæpé usquè ad stylum coalita. *Semina* numerosa rugosa vel lævia, in pluribus seriebus disposita.—Herbæ *perennes vel annuæ.*—Flores *sæpiùs paniculati, vel corymbosi, abortu solitarii. D C.*

Specific Character and Synonyms.

Saxifraga *ligulata;* acaulis, foliis petiolatis coriaceis late obovatis retusis ciliatis, scapo brevi parce bracteato, panicula cymosa.

Saxifraga ligulata. *Wall. in Asiat. Res. v.* 13. *p.* 398, *with a figure. Don, in Linn. Trans. v.* 13. *p.* 348. *Hook. Ex. Fl. v.* 1. *t.* 49. *Sw. Brit. Fl. Gard. t.* 59. *De Cand. Prodr. v.* 4. *p.* 38.

Megasea ? ciliata. *Haw. Enum. Sax. p.* 7.

When this charming plant was first introduced to this country from Nepal by Dr. Wallich, great hopes were entertained that it would prove as easy of cultivation in our open borders as the nearly allied S. *crassifolia*. But the great fickleness of our climate at the early season of its blossoming (January and February), renders it desirable that it should be treated as a hardy greenhouse plant, or the inmate of a cool frame.

Descr.

Descr. *Root* thick and woody, bearing several large spreading, bright-green, broadly ovate *leaves*, beautifully ciliated at the margin, and frequently waved there also. The *petiole* is short, thick, bearing a long, erect, ciliated sheath or ligule (whence the specific name) just above where it is set on to the stem. *Scales* five or six inches long, with one or two *bracteas*, and terminated by a cymose *panicle* of large, handsome, white *flowers*, frequently tinged with rose-colour. *Calyx* obtuse and red at the base, and greener upwards, and five-cleft. *Corolla* of five, obovate *petals*, with short claws. *Stamens* ten. *Filaments* erect, alternately shorter, rose-coloured. *Anthers* reddish-purple. *Germen* free. *Styles* long, erect. *Stigmas* obtuse.

EPACRIS IMPRESSA. FOVEOLATED EPACRIS.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—EPACRIDEÆ.)

Generic Character.

Cal. coloratus, multibracteatus, bracteis texturâ calycis. *Cor.* tubulosa, limbo imberbi. *Stamina* epipetala : *Antheris* supra medium peltatis. *Squamulæ* 5 hypogynæ. *Capsula* placentis columnæ centrali adnatis.—Fruticuli *ramosi, sæpiùs glabri.* Folia *sparsa, petiolata v. basi simplici.* Flores *axillares, in spicam foliatam sæpiùs digesti, albi v. purpurascentes.* ***Br.***

Specific Character and Synonyms.

EPACRIS *impressa ;* floribus pendulis spicatis, foliis lanceolatis sessilibus attenuato-acuminatis, pedunculis calyce ter brevioribus, corollis cylindraceis, tubo calycem bis superante *(Br.)* basi foveolis 5 impresso.

EPACRIS impressa. *Labill. Nov. Holl. v.* 1. *p.* 43. *t.* 58. *Br. Prodr. Fl. Nov. Holl. p.* 551. *Roem. et Sch. v.* 4. *p.* 381. *Spreng. Syst. Veget. v.* 1. *p.* 629. *Sweet Fl. Austral. t.* 4. *Lodd. Bot. Cab. t.* 1691.

An elegant and graceful species of a beautiful Genus, remarkable for the large size and rich deep rose-colour of its pendent flowers. It is a native of Van Diemen's Land, as well as of the south coast of New Holland, and was introduced by Messrs. MACKAY of Clapton, a few years since through their collector, Mr. BAXTER. The plant from which our figure was taken, blossomed in the greenhouse of the Glasgow Botanic Garden, in February, 1835.

DESCR. EPACRIS *impressa* forms a shrub about three feet high, with erect, somewhat virgate *branches,* which are clothed

clothed with a rather dense down. *Leaves* scattered, spreading horizontally or reflexed, lanceolate, gradually attenuated into a sharp and pungent point, the points often purple, glabrous, dark-green above, paler beneath. *Flowers* in terminal, leafy *spikes*, drooping, rather large. *Peduncle* exceedingly short, and clothed with a few, ovate, acute, greenish scales, and partly concealing the calyx, erect, appressed, of five, lanceolate, acuminated, ciliated leaves, in my specimen not one-third of the length of the corolla. *Corolla* beautiful rose-colour : the *tube* cylindrical, or nearly so ; near the base and alternating with the calycine leaves are five depressed spots or foveolæ : the limb of five roundish, but very acute segments. *Anthers* five, sessile, just within the mouth of the corolla. *Germen* globose, with five small adpressed glands or scales at the base. *Style* as long as the tube of the corolla, a little swollen below the middle. *Stigma* capitate, yellow.

Fig. 1. Flower. 2. Pistil :—*magnified.*

Published by Curtis Glasenwood Essex May 1 1[illegible]

Acacia prensans. Prickly feathered Acacia.

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Class and Order.

Polygamia Monœcia.

(Nat. Ord.—Leguminosæ.)

Generic Character.

Flores polygami. *Cal.* 4—5-dentatus. *Pet.* 4—5, nunc libera, nunc in corollam 4—5-fidam coalita. *Stamina* numero varia. *Legumen* continuum. *D C.*
(Sect. IV. § I.****)

Specific Name and Character.

Acacia *prensans ;* caule scandente rhachique foliorum aculeatis ; aculeis sparsis, recurvis : ramulis junioribus sulcatis, rhachibusque pedicellisque fulvo-velutinis : pinnis sub-7-jugis ; foliolis 16—22-jugis, oblongis acutis, inferne marginibusque pubescentibus, subciliatis, basi valde inæqualibus : petiolo infra medium 1-glanduloso ; glandulaque inter 2—4 ultima paria pinnarum, inferiore semper infra jugum posita : capitulis globosis, axillaribus, pedunculatis ; in paniculam laxam, elongatam, primò terminalem, basi foliatam dispositis. *Lowe.*

An Acacia pinnata, *De Cand. et alior.?*

A most elegant and lovely shrub ; but a dangerous neighbour to other plants within its reach, and requiring much space for its display. It would be capable of being formed into an impenetrable fence, or might be advantageously employed to give additional security, if trained along a wall. The flowers are scentless, but singular and handsome, from the strong contrast between the pale yellow bundles of stamens, and the dark dull mulberry-red of their interstices. In the bud the heads are altogether dark dull-red ; becoming yellower as the filaments expand. The native country of this Acacia must remain uncertain : a

single

single tree of it has long existed in the garden of the Valle, near Funchal: but I can learn nothing of the exact date of its introduction, or of its origin. I am indebted to Miss YOUNG for the beautiful and highly characteristic drawing.

DESCR. A climbing *shrub*, of extremely rapid and luxuriant growth, and remarkably elegant and delicate foliage. *Stem* erect and stout, but not thicker than the arm, covered with a dark-brown bark. *Branches* smooth, round, and ash-coloured below; excessively elongated, climbing and clinging tenaciously to every thing within their reach by their copious small hooked prickles, of extraordinarily rapid growth, quickly reaching to the top of any lofty tree within their neighbourhood, which, if unchecked, they soon, by their luxuriance, completely over-run: sulcated towards the ends, which, with all other parts of the plant, while young, are densely but minutely pubescent, or rather velvety, and of a rich tawny, or golden ferruginous colour. *Leaves* very beautiful and feathery, bright-green, subdeflexed, five or six inches long. *Petioles* an inch long, with a sugary gland below the middle, velvety or downy like the rachides, which have from two to four similar glands between the ultimate pairs of pinnæ; the lowest, however, placed always a little below the origin of the pinnæ. The petioles are generally unarmed, but the rachides are prickly beneath. *Leaflets* from sixteen to twenty-two or thereabouts, and generally an odd one at the lower side of the base of each pinna; narrow, almost linear, acute, very unequal at the base, or subdimidiate; beneath and with the edges above pubescent; two or three lines long, and scarcely more than half a line broad. *Stipells* minute, linear, at the origin of the pinnæ. *Stipules* deciduous. *Panicles* six inches to a foot or more long, subcylindrical or thyrsiform, their main stem prickly; at first terminal, but their ends ultimately shoot out into a branch: *Peduncles* full an inch long, round, unarmed, covered with a fulvous or golden-brown tomentum, patent, divaricate, either singly or in bunches of from two or three to five or six from each axil. *Bracteas* ovate or lanceolate, deciduous, ferrugineo-pubescent. *Heads* globose, very dense and close. *Flowers* perfectly sessile, with minute, linear, short, hairy, deep dull-red or purplish bracteolas at their base, not visible externally. *Calyx* pubescent, but shining, cylindrical, four to six-toothed; the teeth short, half-ovate, often unequal in breadth, each two-nerved; base of calyx green; upper part and teeth of a deep dull purplish or mulberry-juice-red. *Petals* four to six, but their number does not uniformly correspond with that of the sepals; pale-green, with whitish edges, and the tip purplish-red; quite smooth, oblong, acute, generally more or less, cohering by the edges, very little longer than the calyx. *Stamens* very numerous and dense; not spreading, but forming close thick bundles, between which appears the dull-red colour of the calyces, contrasting peculiarly with their pale-yellow hue. *Filaments* rather short, smooth, nearly white. *Anthers* small, globose, pale-yellow. *Style* smooth, nearly white, a little longer than the stamens; with a simple *stigma*. *Ovary* minute, green, angular, oblong, slightly hairy, shortly stipitate; containing about seven or eight *ovules*. *Pods* not perfected in Madeira. All the flowers, however, appear to be hermaphrodite. *Lowe.*

Fig. 1. A single Flower, with its minute bracteola at the base. 2. Ovarium and Style:—*both magnified.*

Glazenwood, Essex.

RANDIA BOWIEANA. MR. BOWIE'S RANDIA.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—RUBIACEÆ.)

Generic Character.

Calycis tubus obovatus, limbus 5-lobus. *Corolla* hypocrateriformis, tubo brevi, lobis calycinis in Sect. I. vix longiore, in Sect. II. duplo triplove longiore, limbo 5-partito. *Antheræ* intra faucem sessiles inclusæ. *Stigmata* 2, crassa. *Bacca* calyce coronata subsicca, corticosa, bilocularis. *Semina* in quoque loculo plura, placentæ centrali affixa, in pulpa nidulantia, aut deorsum imbricata aptera. *Albumen* cartilagineum. *Embryo* rectus, radicula tereti, cotyledonibus orbiculatis planis.—Arbusculæ *aut* frutices *ramosissimi*. Spinæ *axillares oppositæ aut subverticillatæ*. Folia *sessilia aut brevi-petiolata*. Stipulæ *utrinque solitaria, interdum evidenter è duabus concretis factæ*. Flores *ex axillis sæpius solitarii subsessiles*. *Genus affine* Posoqneriæ, *a qua dignoscitur fructu vere biloculare*. *D C.*

SECT. II. *Frutices inermes. Corolla tubus apice ad faucem sæpius dilatatus obconicus.—An genus proprium? D C.*

Specific Character and Synonyms.

RANDIA* *Bowieana*; inermis, fruticosa, glabra, foliis in ramos terminalibus obovato-oblongis acuminatis brevi-petiolatis membranaceis subtus venis obsolete pubescentibus, stipulis membranaceis, floribus in ultima ramulorum axilla terminalibus solitariis, corollæ tubo longissimo, calycis lobis subfoliaceis spathulatis.

RANDIA *Bowieana*. *Allan Cunningham, MSS.*

A

* Named after ISAAC RAND, an English Apothecary.

A handsome stove plant, discovered in the year 1815 by Mr. Allan Cunningham and Mr. Bowie the King's Botanical Collectors, in Brazil, and by them sent to the Royal Gardens at Kew. I am indebted to Mr. Aiton for the fine specimen here figured. The Genus must remain doubtful, until we have the opportunity of examining the fruit. Mr. Cunningham observes the ovary to have "two cells, and each cell to contain many ovules, which appear evidently to indicate that the seeds in the mature fruit are enveloped in a soft pulp;" and he agrees with me in thinking that for the present, it is best referred to Randia.

Descr. A *shrub* of slender habit, "destitute of spines (in cultivation), with opposite *branches*, and clothed with glabrous, brown *bark*: bearing the *leaves* at the extremity of long, straight shoots, so that they appear clustered. But however closely they are placed, they are opposite, oblong, but broader upwards, acuminate, membranaceous, waved, situated on rather short stalks, glabrous every where except on the midrib and nerves beneath, where there is a slight degree of downiness from minute, appressed hairs. *Stipules* opposite, large, membranaceous, imbricated, oblong, and slightly acuminated. The *flower* is large, handsome, solitary, terminal upon a branch that has become axillary by innovations from beneath it. *Calycine segments* half an inch long, spreading, spathulate, somewhat leafy. *Tube* of the *corolla* very long, cylindrical, and green for the greater part of its length, moderately dilated and yellowish above, the *limb* spreading, or slightly recurved, of five large, obovate, yellow-buff-coloured segments. *Anthers* linear, sessile, situated just at the mouth of the corolla. *Style* filiform, as long as the tube of the corolla; *Stigma* large, clavate, yellow, exserted.

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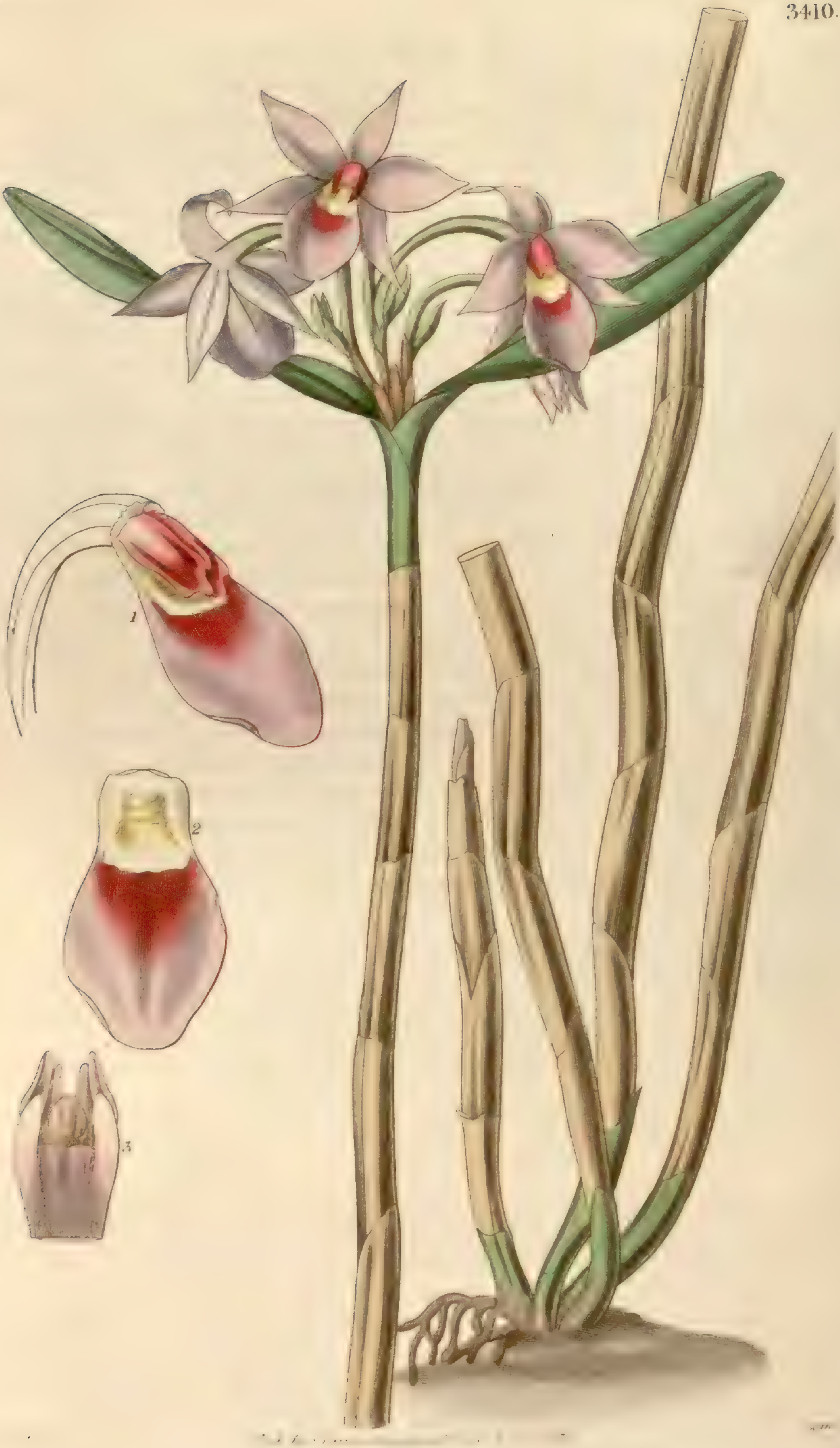
* Apex of a Flowering Branch, with the lower part of a Flower. 2. Upper part of the Corolla, laid open to show the Stigma and Anthers. 3. Anther: *magnified.*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EPIDENDRUM? STENOPETALUM. ACUTE-PETALED EPIDENDRUM.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Sepala patentia, subæqualia. *Petala* sepalis æqualia, vel angustiora, rarius latiora, patentia vel reflexa. *Labellum* cum marginibus columnæ omnino vel parte connatum, limbo, integro vel diviso, disco sæpius calloso, costato vel tuberculato ; nunc in calcar productum ovario aceretum et cuniculum formans. *Columna* elongata : clinandrio marginato, sæpe fimbriato. *Anthera* carnosa, 2—4-locularis. *Pollinia* 4, caudiculis totidem replicatis annexa.—Herbæ *(Americanæ) epiphytæ, caule nunc apice vel basi pseudo-bulboso nunc elongato apice folioso.* Folia *carnosa rarissime venis elevatis striata.* Flores *spicati, racemosi, corymbosi, vel paniculati, terminales vel laterales. Lindl.*

Specific Name and Character.

EPIDENDRUM *stenopetalum ;* caulibus erectis flexuosis articulatis striatis apice diphyllo, foliis lineari-oblongis obtusis coriaceis ; corymbo subumbellato sessili, sepalis petalisque ovatis acuminatis subæqualibus patentibus, labello patente libero obovato obtusissimo basi intus subtuberculoso, columna apice dentata.

This very pretty Orchideous plant was received at the Glasgow Botanic Garden from Jamaica, by favor of Mr. MACFADYER, and flowered in that establishment in February and March of the present year, 1835. The plant is new to Professor LINDLEY, but owing to the imperfect state of the anther, we cannot refer it with certainty to the present Genus.

Genus. If it be really an EPIDENDRUM, as its habit would lead one to conclude, it is another species added to that small groupe of the Genus, with a column quite distinct from the lip, to which our E. *bicornutum*, t. 3332, belongs. The flowers continue for a considerable length of time in perfection.

DESCR. *Root* of rather thick, branched *fibres*, throwing up several erect, simple *stems*, ten inches or a foot high, flexuose, jointed, rounded and striated, a little tapering at the base and at the extremity, and partly sheathed by the bases of former years' *leaves*, and terminated at the extremity by two spreading, linear-oblong, coriaceous, very obtuse, smooth leaves, from two to three inches in length. From between these the *flowers* arise in a sort of *corymb*, having an umbellate appearance of from four to six in number, and nearly sessile. *Peduncles* scaly below. *Flowers* slightly curved. *Sepals* three, spreading, ovato-lanceolate, acuminate, *petals* also spreading, ovate acuminate, both of a delicate rose colour. *Lip* quite free, by no means adnate with the *column*, patent, obovate, very obtuse at the base, above having a square, yellowish-white, slightly tuberculated disk, the rest of the lip is rose-coloured, with a dark red spot in the centre. *Column* short, deep rose-colour, keeled on the back, toothed at the apex, white beneath. Within a cavity, just below the apex, the *anther* is situated, but it seems to be in an imperfect state.

Fig. 1. Lip and Column. 2. Lip. 3. Front view of the Column: *magnified.*

Curtis del.ª

Pub. by S. Curtis. Hazenwood Essex. June 1. 1835.

Swan Sc.

Echinocactus Eyriesii. Sweet-scented Spiny Cactus.

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Class and Order.

Icosandria Monogynia.

(Nat. Ord.—Cacteæ.)

Generic Character.

Sepala numerosa, imbricata, basi ovarii adnata, in tubum brevissimum concreta, exteriora involucriformia, interna petaliformia. *Stamina* numerosa. *Stylus* filiformis, apice multifidus. *Bacca* sepalorum reliquiis subsquamata. *Cotyledones* nulla?—Frutices *simplicissimi, carnosi, ovati aut globosi, melocactoidei, costati, aphylli, costis tuberculis confluentibus quasi formatis, dorso aculeorum fasciculos gerentibus*. Cephalium *seu* spadix *nullus*. Flores e *fasciculis aculeorum ad apices costarum orti, similes floribus* Cerei *sed tubo vix ullo donati. D C.*

Specific Character and Synonyms.

Echinocactus *Eyriesii*, caule subgloboso umbilicato, costis 13 continuis aculeatis subundulatis, tuberculis lanatis spinas plures breves rigidas rectas gerentibus, flore bucciniforme curvato 6 uncias longo odoratissimo extus cinereo villoso, petalis acutissimis stellatis. *Lindl.*

Echinocactus Eyriesii. "*Otto in Verhandl. Preuss. Gart. ver. c. ic.*" *Lindl. Bot. Reg. t.* 1707.

The drawing of this charming Echinocactus, no less remarkable for the great size of the flower, than for its delicious fragrance, was made by Mr. Henry Curtis, the youngest son of the Conductor of this work, in whose choice collection, at Glazenwood, it flowered in Jan., 1835. This noble flower, like that of Cereus *grandiflorus*, seems to

to expand only at night. It is a native of Mexico, having been introduced to the Horticultural Society, according to Dr. Lindley, some years ago by Sir John Lubbock.

Descr. *Stem* subglobose, depressed, and even umbilicated at the top, about as large as a middling-sized orange, marked with several, twelve to fourteen, sharp and prominent angles, upon which are several white, rounded, woolly *tubercles*, mixed with several short and not very conspicuous spines. The *flower* is exceedingly large in proportion to the size of the stem, and breaks forth from one of the angles, ascending. *Tube* a span long, funnel-shaped, greyish green, woolly, and marked with numerous tufts of oblong brown hairs; within green. *Petals* numerous, lanceolate, very acuminate, white, patent, often reflexed. *Stamens* numerous, rising a little above the tube of the flower, most numerous on one side: *Anthers* yellow. *Style* scarcely reaching to the summit of the stamens. *Stigma* rayed.

Pub. by S. Curtis, Glazenwood Essex. June

CYPRIPEDIUM INSIGNE. LARGE-FLOWERED LADY'S SLIPPER.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Labellum ventricosum inflatum (nunc saccatum.) *Columna* postice terminata lobo petaloideo (stamine sterili) antheras distinguente. *Petala* duo antica sæpe connata. *Br.*

Specific Character and Synonyms.

CYPRIPEDIUM *insigne;* acaule, foliis cartilagineis ligulatis scapo piloso dimidio brevioribus, perianthii lacinia superiore fornicata emarginata, lateralibus obovatis subundulatis obtusis extus pubescentibus, inferiore labello venoso basi inflexo paulo longiore. *Lindl.*

CYPRIPEDIUM insigne. *Wall. MSS. Lindl. Coll. Bot. t. 32. Hook. Ex. Fl. t.* 34. *Lodd. t.* 1321.

Of the most beautiful Genus CYPRIPEDIUM, no species, perhaps, excels that here figured, whether the size of the blossom, or the colour and markings of the floral coverings be considered. It is a native of Nepal, along with its near affinity, C. *venustum*. Both were introduced to our gardens through the liberality of Dr. WALLICH, and both are remarkable for their distichous and coriaceous leaves. The individual here figured blossomed during the winter months, in Mr. CURTIS's collection, at the Glazenwood Nursery, and the drawing was made by Miss MARIA CURTIS.

DESCR. *Stem* none. *Leaves* radical, few, and equitant at the base, broadly linear, coriaceous, distichous, keeled at the back, glabrous, of a yellow-green colour. *Scape* terete, downy, curved at the extremity, and there bearing an

an ovato-oblong, green, glabrous, remarkably compressed, striated *spatha*. *Flowers* solitary, very large, three to four inches across: the two outer segments of the perianth (the upper and lower, the lower being formed of two combined) broadly ovate, almost rotundate, the lower and smaller one of an uniform green, the upper green, except the extremity, which is white; the whole, especially the disk, richly spotted with brown. The two inner and *lateral segments* spreading, oblong, broader towards the extremity, yellow-green, with purple striæ, pale at the base. *Lip* large, saccate, rich greenish-brown without, yellow within. *Column of fructification* short, terminated by a large, obversely cordate, yellow, slightly convex lobe, glandular below, beset with minute red hairs above: beneath this, at the base, are two short, lateral processes or *filaments*, to the side of each of which is attached a single, sessile, two-lobed, orange-yellow *anther*; its lobes rather unequal.

Swan Sc.

Pub. by S. Curtis Glazenwood Essex June 1.1833.

Barosma crenulata. Crenulated Diosma, or Bucku.

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Class and Order.

Pentandria Monogynia.

(Nat. Ord.—Rutaceæ.)

Generic Character.

Calyx 5-partitus, laciniis æqualibus. *Petala* oblonga, subsessilia. *Filamenta* 10; *alterna* sterilia petaliformia, staminibus breviora. *Stylus* petala æquans. *Stigma* æquale, obtusum. *Bartl. et Wendl.*

Specific Character and Synonyms.

Barosma* *crenulata;* stylo inferne villoso, foliis lanceolato-ovalibus obtusis crenulatis dorso incisurisque glanduloso-punctatis, pedunculis axillaribus uni-trifloris.

Barosma crenulata. *Willd. Enum. Hort. Berol. Suppl. t.* 12. *Roem. et Sch. Syst. Veget. v.* 5. *p.* 448.

Diosma crenulata. *Linn. Amæn. Acad. v.* 4. *p.* 308.

Diosma crenata. *Linn. Sp. Pl. p.* 287. *Thunb. Fl. Cap. ed. Schult. p.* 227. *Willd. Sp. Pl. v.* 1. *p.* 1138. *(not De Cand., nor Lodd. t.* 404., *nor Woodv. Med. Bot. Suppl. t.* 14.)

Bucco crenata. *Roem. et Sch. v.* 5. *p.* 414.

Parapetalifera odorata. *Bartl. et Wend. Coll.* 1. *p.* 50. *t.* 15.

Diosma odorata. *De Cand. Prodr. v.* 1. *p.* 714.

Diosma serratifolia. *Burch. Trav. in Afr. v.* 1. *p.* 476, *figure (not Curt.)*

Diosma serratifolia. *β. Bartl. et Wendl. Diosm. p.* 99. *(not α.)*

Diosma latifolia. *Lodd. Bot. Cab. t.* 290. *(not of Linn. and scarcely Andr.)*

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* From βαρυς, *strong*, and οσμη, *small*, from the powerful scent of the leaves.

There

There are, perhaps, few plants, that have been long cultivated in our collections, which are less understood and which require more illustration by figures, than the various species of the old Genus Diosma of the Cape, and which now constitute a section of the Nat. Ord. Rutaceæ, of which Messrs. Bartling and Wendland, in an excellent little work, entitled "Diosmeæ Descriptæ et Illustratæ," (Göettingen, 1824,) have constituted nine distinct Genera. The individual now figured is an old inhabitant of our greenhouses, where it has gone under various names, such as Diosma *crenata*, D. *latifolia*, D. *odorata*, &c. Wendland figured it under the name of Parapetalifera *odorata* in his Colect. 1. t. 15, but he afterwards made it the var. β. of Diosma *serratifolia*, Curt. Mag. p. 456, and has referred to the same *var*. the D. *crenata*, of Linn., Thunb., Willd., &c. But surely if it can be proved to be the D. *crenulata* (not *crenata*) of Linn. Amæn. Acad., that name ought to be adopted, in preference to any other: and Linnæus's description does appear to me to be so characteristic, ("Rami rubentes. Folia glabra, lanceolata-ovalia, obtusa, petiolata subtus punctis adspersa, margine obsolete serrata, puncto pellucido intra singulam senaturam," &c.) that, for my own part, I have no hesitation in preferring the name. My opinion is further strengthened by a remark of Sir J. E. Smith in Rees's Cyclopædia, where he notices the great affinity of the D. *serratifolia* (a *supposed* Australian species) with the D. *crenata* of Linnæus. Of the true D. *serratifolia*, I have only seen cultivated specimens; they have much longer, narrower, and acuminated leaves, marked with raised glands on the upper surface, as well observed by Mr. Curtis, and with three distinct nerves, as figured and described by Ventenat (Jardin de Malmaison, t. 77.) decidedly serrated leaves, and always pure white flowers: so that I have no hesitation in keeping these two distinct. The D. *serratifolia* of Burchell, (Travels, v. 1. p. 476, figure,) if the shape of the leaves be correct, I can have no hesitation in referring to our *crenulata*; the valuable properties of which as an internal medicine, and as an outward application* for healing

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* A Hottentot being severely wounded by the bursting of a gun, his companions expressed so much faith in the powers of *Bookoe-azyn* (Bookoo Vinegar) as a wash to cleanse and heal the wound, that I allowed it to be used. Our small stock of this liquid soon failing, we had recourse to an infusion of the Diosma leaves in brandy, with which the injured part was washed night and morning for two or three weeks, the effect of this application

healing lacerated flesh, are related by Mr. BURCHELL, in the same volume. Lastly, I may mention that the BUCKU of our Pharmacopæias, which has lately obtained so much celebrity as a sudorific, diuretic, and tonic; such at least as I have examined from the Glasgow Apothecary's Hall, undoubtedly belongs to the present species. Hence, though others of the DIOSMA groupe may contain similar properties, abounding as they all do in a strong aromatic odour, and glands filled with essential oil, yet by the Hottentots and those who gather *Bucku* for the European market, preference is given to our BAROSMA *crenulata*. The scent seems to me to be as powerful as that of any other of the tribe, but at the same time much more agreeable, and more resembling that of some Mints. Mr. LODDIGES observes, that it is extremely difficult to propagate by cuttings, that seeds are never produced with us; and that we are dependent for increase upon supplies which now and then reach us from its native country. The species is really a handsome one: the flowers which appear in early spring, continuing a long time in perfection, are purple in bud, of a delicate bluish colour when fully expanded. As in the *Rue*, the stamens are applied alternately to the stigma where the pollen is discharged.

DESCR. The plant from which our description and figure are taken, is an upright *shrub*, between two and three feet in height, with twiggy *branches* of a brownish-purple tinge. *Leaves* decussate, spreading, about an inch long, oval-lanceolate, on very short *petioles*, very obtuse, delicately and minutely crenated, quite glabrous, rigid, darkish-green, and quite smooth above, with a few very obscure oblique *nerves*, beneath paler, dotted with glands which are scarcely pellucid, while at every crenature is a conspicuous pellucid gland; there is also a narrow, pellucid margin round the whole leaf. *Peduncles* about as long as the leaf, axillary and terminal, chiefly from the superior leaves, single-flowered, often (but not always) bearing a pair of small opposite leaves, or bracteas, above the middle, each of which in my native specimens sometimes bears a flower in its axil. Beneath the *calyx* are two or three pairs of small imbricated bracteas. *Calyx*

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tion being very satisfactory. This *Bookoe*, or *Bucku-azyn*, is made by simply putting the leaves of DIOSMA *serratifolia*, or some other species of the same Genus, into a bottle of cold vinegar, and leaving them to steep; the vinegar being esteemed in proportion to the time during which the infusion has been made, and sometimes turning to a mucilage.

Calyx of five ovato-acuminate *leaflets*, green, tinged with purple. *Corolla* of five ovate *petals*, purple in bud, blush-coloured when fully expanded. *Stamens* five, at first erect, then recurved, about as long as the petals. *Filaments* slightly villous. *Anthers* oblong. *Barren filaments* five, lanceolate, white, rather villous, tipped with a gland, the lower part erect, the upper half spreading. *Hypogynous disk*, an annular, dark-green gland. *Germen* very short, abortive (?) crowned with five lanceolate, fleshy, slightly spreading appendages. *Style* filiform, curved: *Stigma* minute.

Fig. 1. Peduncle and Flower, from which the Petals have been removed.
2. Pistil and hypogynous disk:—*magnified.*

PRIMULA PALINURI. PALINURIAN PRIMROSE.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—PRIMULACEÆ.)

Generic Character.

Calyx 5-dentatus. *Corolla* hypocrateriformis, tubo cylindraceo, ore nudo. *Stigma* capitatum. *Capsula* unilocularis, decem-dentata.

Specific Character and Synonyms.

PRIMULA *Palinuri ;* subcaulescens, foliis obovato-spathulatis dentatis glabris, scapo laterali foliis longiore, umbella subnutante, involucro inæquali pedunculos æquante, corollæ limbo margine incurvo.

PRIMULA Palinuri. *Jacq. Eclog. p.* 63. *t.* 43. *Tenore, Fl. Neap. t.* 14. *Lehm. Prim. p.* 43. *Spreng. Syst. Veget. v.* 1. *p.* 575. *Hooker, Ex. Fl. t.* 118.

We have chosen a small-sized plant of the PRIMULA *Palinuri* as best suited to the size of our page. In some of the individuals cultivated by Mr. MURRAY in the Glasgow Botanic Garden, the foliage is thrice the size of that here represented, and has a most striking resemblance, as Professor LEHMANN has well observed, to that of a luxuriant plant of SEMPERVIVUM *arboreum*. This circumstance, together with the bright yellow corollas, almost pure white, mealy calyces, pedicel, and involucre, and the season of its blossoming (March) render it a most desirable acquisition. The fragrance too, similar to that of the Cowslip, but more powerful, is another recommendation. It is a native of Palinuri near Salerno, in the Neapolitan dominions ; and in the more Southern parts of Britain it appears that it may be cultivated in the open border.

DESCR.

Descr. Perennial. There is an evident *stem*, rising two or three inches above ground, marked with the scars of the fallen leaves, the perfect *leaves* forming a spreading crown to the summit. These are, in our plants, from four to six or eight inches in length, obovato-spathulate, irregularly toothed at the margin, except in the lower half, quite glabrous and naked (not mealy), obscurely veined, and of an uniform pale green colour. *Scape* from among the lower leaves, and longer than they, rounded, glabrous, bearing a somewhat drooping *Umbel*. *Involucre, pedicels,* and *calyces* densely covered with a white, mealy, or powdery substance, in which the fragrance appears to reside. *Corolla* full yellow, infundibuliform, the segments nearly erect, their margins incurved. *Stamens* included. *Germen* globose: *Style* filiform, as long as the tube. *Stigma* capitate, glandular.

Pub.by S.Curtis Glaxenwood Essex June 1.18

CRASPEDIA MACROCEPHALA. LARGE-HEADED CRASPEDIA.

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Class and Order.

SYNGENESIA SEGREGATA.

(Nat. Ord.—COMPOSITÆ. Sub-tribe GNAPHALIEÆ. I. *Craspediæ. Less.*)

Generic Character.

Capitulum compositum, subglobosum. *Involucrum* imbricatum, polyphyllum. *Involucella* subpentaphylla, foliolis membranaceis uniserialibus. *Capitula* partialia subquinqueflora, flosulis infundibuliformibus. *Pappus* uniserialis plumosus.—Herbæ *Australasicæ, simplices, monocephalæ ;* foliis *lineari-oblongis, inferioribus spathulatis.*

Specific Character.

CRASPEDIA* *macrocephala ;* foliis latis strigoso-hirsutis.

This very interesting plant was raised by Mr. CURTIS, at his extensive nursery-ground, Glazenwood, in the summer of last year, from seeds brought by Dr. WILSON from Van Diemen's Land. "They were gathered," Mr. CURTIS observes, "by Mr. WILLIAM DAVIDSON, the Curator of the Hobart Town Botanic Garden, on Mount Wellington, at an elevation of three thousand feet above the level of the sea. The plant flourishes with me in a common pit, but I expect it will prove quite hardy, though I do not venture to remove it to the border during winter. The appearance of the foliage is similar to that of AMMOBIUM *alatum,* but of a more bluish green, and the smell of the flowers resembles that of honey-comb, or of the BUDDLEA *globosa.*"

The

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* From κρασπεδον, a *fringe*, in allusion, probably, to the appearance of the pappus.

The recent plant I have not had the opportunity of seeing: but from the accurate drawing made by Mr. William Curtis, and with the assistance of native dried specimens in my possession, gathered by the late Mr. Lawrence, on the summits of the western mountains of Van Diemen's Land, I am able to draw up the following character.

Descr. *Root* perennial. *Stem* eighteen inches or more high, simple, terminated by a single, large head of *flowers*, and, as well as the foliage, of a bluish or glaucous colour, and clothed with appressed rather silky hairs. *Leaves* oblong, alternate, gradually smaller upwards, the lower and root-leaves much the longest, and broader upwards, so as to be spathulate. *Capitulum* nearly globose, dirty yellowish-white. *Involucre* of several imbricated, ovate or obovate *leaflets*, margined with brown, as are some of the upper leaves. The *head of flowers* itself, if carefully examined, will be seen to be made up of numerous compact smaller or partial *capitula*, each of about five *flowers*, and surrounded by about five lanceolate membranaceous scales of a partial involucre. Of the *florets* some appear to be neuter, others perfect. *Corollas* infundibuliform, the *tube* remarkably slender. *Germen* slender and filiform in the abortive florets, obovate, compressed and silky in the fertile ones. *Pappus* of about fourteen setæ, which are beautifully plumose.

Fig. 1. Partial Capitulum with its Involucre. 2. Single Floret, with one of the Scales of the Involucre:—*magnified.*

W. T. H.

Swan St.

VANDA ROXBURGHI; *var.* unicolor. DR. ROXBURGH'S VANDA; whole-coloured *var.*

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Wentworth, by Mr. Cooper, has an aspect so different from the Vanda *Roxburghi* of the Bot. Reg. and Magazine above quoted, that notwithstanding it was communicated by Mr. Loddiges to Mr. Cooper under that name, I could not at first bring myself to consider it other than a distinct species, and Mr. Cooper seems himself inclined to the same opinion. But upon a careful examination and comparison it will be seen that, independent of the luxurious state of our plant, so characteristic of all the epiphytes cultivated at Wentworth, the difference chiefly depends upon the colour of the upper side of the sepals and petals, of a greener hue, and distinctly tessellated, like the flowers of the common Fritillary; whereas, in our plant, this part is of an uniform glossy, chestnut-brown colour. The lip, at least the large middle lobe, is tinged of the same colour instead of being purple, as in the original V. *Roxburghi*.

The plant from which this drawing was made, has attained a height of five feet, bearing several lateral branches and throwing out many tortuous roots.

Fig. 1. Side view of the Column and Lip. 2. Front view of the same. —*Magnified.*

Pub.by S.Curtis,Glasshouse Fenchurch Street Jul.1.1835

STYPANDRA PROPINQUA. SLENDER, AZURE-FLOWERED STYPANDRA.

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Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—ASPHODELEÆ.)

Generic Character.

Perianthium 6-partitum, æquale, patens, deciduum. *Stamina* 6. *Filamenta* infrà attenuata, curvata, glabra, suprà stuposo-barbata. *Antheræ* basi emarginatæ insertæ. *Ovarium* loculis polyspermis. *Stylus* filiformis. *Stigma* simplex. *Capsula* 3-locularis, 3-valvis. *Semina* pauca, ovalia, lævia umbilico nudo. *Embryo* rectus. *Br.*

Specific Character and Synonym.

STYPANDRA* *propinqua;* glaucescens, foliis omnibus distinctis remotiusculis strictis plùs minùsve aversis: baseos marginibus æqualiter rectis.
STYPANDRA propinqua. *All. Cunn. MSS.*

A handsome plant, differing from S. *glauca* of Mr. BROWN, to which it is very closely allied, in being altogether of more slender habit, with narrower leaves, of which the upper surface is as frequently presented to the stem of the plant, as turned from it, both margins at the base being alike straight, and not as in S. *glauca,* where one edge, above the sheathing of the leaf, is uniformly bent back. It is a native of the interior of New South Wales, and was originally detected in 1822, growing in large tufts among sandstone rocks, in the broken country on the north of the settlement of Bathurst.

From

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* From στυπη, *tow,* and ανηρ, a *male,* so named from the dense tuft of hairs at the upper part of the filament.

From seeds, gathered at the period of its discovery, it was raised in Kew Gardens, where it has ever since been an inmate; but, under whatever culture, has not shown itself a plant of free growth.

It appears to succeed best in a dry, warm part of the greenhouse, where it annually puts forth its pretty azure blossoms in the spring. The plant has not hitherto ripened its seeds in this country, but may be increased by cuttings.

Descr. A tufted, smooth, subglaucescent, perennial plant, throwing up from the roots, many slender, slightly-compressed reclining stems, which are clothed with the sheathing bases of the leaves. *Leaves* wholly cauline, distinct, alternate, four inches long and under, erect-patent, distichous, the upper pagina more or less opposed to the stem, or but slightly turned from it; carinate, striated with many longitudinal lines, sheathing at the base, where the membranaceous margins are equal and simple. *Flowers* of a bright azure, terminal, formed into a corymbose panicle, each corymb few-flowered, sheathed at the base by a foliaceous, acuminated bracte. *Pedicels* ebracteated, nodding, simple, dichotomous, or umbellate. *Perianth* six-partite, nearly equal, each segment ovate, acute, five-nerved. *Stamens* six, hypogynous, erect, of a bright yellow. *Filaments* smooth, attenuated, curved; the upper portion thickened into a bearded or stupose tuft. *Anthers* bilocular, bursting longitudinally, and after dehiscence revolute, curved at the apex; base emarginate, at which point they are attached to the filaments. *Stigma* subcapitate. *All. Cunningham.*

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DENDROBIUM DENSIFLORUM. MANY-FLOWERED DENDROBIUM.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Sepala membranacea, erecta v. patentia, lateralibus majoribus obliquis cum basi producta columnæ connatis. *Petala* sepalo supremo sæpiùs majora, nunc minora, semper membranacea. *Labellum* cum pede columnæ articulatum v. connatum, semper sessile, indivisum v. trilobum, sæpiùs membranaceum, nunc appendiculatum. *Columna* semiteres basi longè producta. *Anthera* bilocularis. *Pollinia* 4, per paria collateralia.—Herbæ *epiphytæ, nunc caulescentes, nunc rhizomate repente pseudo-bulbifero.* Folia *plana, sæpiùs venosa.* Flores *solitarii fasciculati,* v. *racemosi, speciosi. Lindl.*

Specific Character and Synonyms.

DENDROBIUM *densiflorum ;* caulibus articulatis clavatis pendulis apice foliosis, foliis oblongis acutis nervosis, racemis lateralibus multifloris foliis longioribus : junioribus strobiliformibus, bracteis oblongis plicatis recurvis pedicellis longioribus, sepalis patentissimis ovatis obtusis, petalis conformibus majoribus, labello majore rhomboideo unguiculato serrulato retuso. *Lindl.*

DENDROBIUM densiflorum. *Wall. Cat. n.* 2000. *Lindl. in Wall. Pl. As. Rar. n.* 40. *Gen. et. Sp. Orchid. P.* 1. *p.* 90.

Early in the month of March of the present year, I had the pleasure to receive this very handsome Orchideous plant from the Lord FITZWILLIAM's collection at Wentworth, by the

the kindness of Mr. Cooper. This indefatigable and most successful cultivator of *Orchideæ* observes, that he received it through the liberality of the Horticultural Society, to whom it was sent by Dr. Wallich. According to that gentleman's account, in the place above quoted, the plant is an inhabitant of Nepaul, where it flowers during the rainy seasons. If we may judge from the specimen figured in Wallich's "Icones," Mr. Cooper will have the satisfaction of seeing a much larger raceme of flowers at some future season, and one that will amply deserve the specific name Dr. Wallich has given to it. But in fact, of two plants possessed by Mr. Cooper, one only, and that the offset (the one here figured) has blossomed, the other, and a much finer specimen, has as yet shown no disposition to flower.

Descr. The plant from which our drawing was taken is about a foot in height. The *stem* is jointed, clavate, compressed, furrowed, with the joints sheathed by a delicate membrane, bearing at the extremity about three distichous broadly lanceolate, obscurely nerved, dark-green, coriaceous *leaves*. *Raceme* lateral, from the extremity of the joint, immediately beneath the lowest leaf, longer than the leaves, recurved, bearing numerous, handsome, orange-buff-coloured *flowers*, quite destitute of fragrance. *Bracteas* lanceolate, reflexed, striated, straw-coloured, membranaceous. *Sepals* and *petals* similar in shape and colour, ovate, obscurely striated, but the two lower sepals unite and run down into a blunt spur at the base of the lip. *Lip* deep orange-colour, with an orbicular, concave lamina, beautifully fringed at the margin, and hairy on the upper surface, tapering below into a claw, within which is a small, bifid, fringed scale, directed inwards. *Column* short, orange-yellow, decurrent below where the lip unites with it. *Anthers* nearly hemispherical, attached by a filament to the back of the column.

Fig. 1. Side view of the Lip. 2. Front view of the Column:—*magnified.*

LEPTOSPERMUM SCOPARIUM; *var.* grandiflorum.
RIGID-LEAVED LEPTOSPERMUM; large-flowered *var.*

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Class and Order.

ICOSANDRIA MONOGYNIA.

(Nat. Ord.—MYRTACEÆ.)

Generic Character.

Calycis tubus subturbinatus; *limbus* 5-fidus lobis triangularibus valvatis. *Pet.* 5. *Stam.* 20—30 libera, petalis breviora. *Stylus* filiformis. *Stigma* capitatum. *Capsula* 4—5-locularis, rarissimè 3-locularis. *Semina* oblonga minima.—Frutices *Novæ Hollandiæ.* Folia *alterna, integerrima, punctata, parva.* Flores *albi.* *D C.*

Specific Character and Synonyms.

LEPTOSPERMUM* *scoparium;* foliis ovatis mucronatis obsoletè trinerviis, calycibus glabris, dentibus membranaceis coloratis. *De Cand. Prodr. v. 3. p. 227. Spreng. Syst. Veget. 2. p. 492.*

(Var.) *grandiflorum;* flore magno roseo, vel in umbrâ sæpe albo.

An old inhabitant of our gardens, having been raised at Kew, from seeds received from Port Jackson, so far back as the year 1817. Although it does not appear specifically distinct from L. *scoparium,* LIN., having the squarrose, acuminate leaves, smooth calyx, and coloured calycine segments of that species, it is, nevertheless, a very interesting variety, remarkable for the large size of the flowers, and the blush-coloured tint of their petals.

It

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* From λεπτος, *slender,* and σπερμα, the *seed,* on account of the minuteness of the seeds.

It is a desirable plant for the conservatory, as it usually commences flowering, which it does very copiously, in the early spring, and continues in blossom the greater part of the summer; but it should be placed in a situation fully open to the light, for then its flowers, which often extend along the last year's branches, thus forming a kind of racceme, are all, more or less tinged with a rose-colour; whereas, if crowded among other and taller plants in the greenhouse, the petals expand and continue of a pure white. In its native swamps in the neighbourhood of Botany Bay, beneath an almost ever-sunny sky and amidst a considerable glare of light, the flowers are uniformly of a deep rose-colour. It may be propagated by cuttings as well as by seeds, which appear to ripen plentifully.

Descr. A bushy *shrub*, five feet high, much branched, clothed with a pale-brown bark: *branches* rather slender, spreading or dependent, subdivided; *branchlets* attenuated, silky, with appressed hairs. *Leaves* alternate, more or less crowded on the branchlets, ovate, ovate-lanceolate, acuminate, mucronate, short-petioled, patent, rigid, concave, smooth on the upper side, obsoletely three-nerved and silky beneath, with numerous small dots, margins membranaceous and rather scabrous. *Flowers* large and white when influenced by shade, but when exposed to the light, rose-coloured, solitary, lateral or axillary, on short footstalks. Adherent tube of the *calyx* smooth, minutely dotted, *limb* of five obtuse, oval, membranaceous coloured lobes, deciduous. *Petals* five, white, or tinged with a rose-colour, large, orbicular, with a short claw, inserted in the calyx between its lobes, spreading, smooth, obsoletely nerved, dotted, margins slightly repand. *Stamens* between thirty and forty, inserted in the calyx, and scarcely one-third of the length of the petals. *Filaments* erect, white, curved inwards. *Anthers* pale-brown, bilocular, several apparently abortive. *Ovarium* inferior, summit five-lobed, glandulous, bearing a thick, fleshy style in the centre, which is nearly the length of the stamens. *Stigma* capitate, flattened. *Capsule* smooth, glossy, pale-brown, hemispherical, five-celled, each cell containing numerous slender seeds.

Pub. by S. Curtis Glazenwood Fine Feb.1 1835

Acacia tristis. Mournful Acacia.

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Class and Order.

Polygamia Monœcia.

(Nat. Ord.—Leguminosæ.)

Generic Character.

Flores polygami. *Cal.* 4—5-dentatus. *Pet.* 4—5, nunc libera, nunc in corollam 4—5-fidam coalita. *Stam.* numero varia, 10—200. *Legumen* continuum, exsuccum, bivalve. *D C.*

Specific Character and Synonym.

Acacia *tristis;* stipulis setaceo-spinescentibus deciduis, phyllodiis falcatis nervis duobus inæqualibus margine superiore recurvo, pedunculis subsolitariis cumque folio longiore ramuloque sulcato puberulis. *Graham.*

Acacia tristis. *Graham MSS.*

This plant was raised at the Botanic Garden, Edinburgh, from seeds communicated by the late Mr. Fraser from New Holland in 1828, and flowered freely both in the greenhouse and on the open wall in March and April, 1835. Its nearest affinity is to A. *undulata*, Willd., but may be easily distinguished from this by its lurid, not lively green colour, by the peculiar nervation of its leaves *(phyllodia)* by these being longer both actually and relatively to the peduncle, by its more setaceous stipules, which are lateral, not inferior and distinct, not coalescent at the base, by its pubescence, by its capitula being generally single, very rarely in pairs, the reverse of which is the case in A. *undulata*, in which also the flowers are larger with much more acuminated bracteæ. It is also, and perhaps quite as nearly, allied to A. *armata*, from which it is distinguished by the smaller degree of hairiness of the branches, by the pubescent peduncles shorter than the leaves, and by the nervation of these. In the arrangement of the species it ought to stand between A. *undulata* and A. *armata*. The nervation of the leaf is nearly that of A. *verniciflua*, from which it is distinguished by its stipulæ.

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In the present state of our knowledge these characters must be admitted as specific distinctions, but it is not at all improbable that we shall hereafter be found to have very unduly multiplied species in this Genus. In other Genera forms far more unlike than many of these are to each other, are known, from their history and cultivation, to be hybrids or seedling varieties. The Acacias are seldom raised from the seeds of cultivated plants, and we have but an imperfect assurance that in the wild state they have not that mutability of form which occurs in other Genera, and renders all specific distinctions uncertain. These observations are particularly forced upon me by the remarkable varieties of form which exist among the different specimens of Acacia *decipiens*, A. *longifolia*, A. *stricta*, and especially of A. *verniciflua*, at present in flower both in the greenhouse and in the open air at the Botanic Garden, Edinburgh.

The specific name is descriptive of the drooping branches of our plant, and dull-green colour, compared with its nearest allies; but was first suggested by circumstances, entirely personal, under which I write the description.

Descr. *Shrub* erect; *branches* drooping, puberulent, many-furrowed, when young green, afterwards brown. *Stipules*, like strong, rigid, straight, and spreading setæ, which are at first green, and flattened on the sides which are towards the leaf, soon becoming brown, and at last falling, lateral, and free at the base. *Leaves* very shortly petioled, sub-erect, dark-green, slightly falcate, curving upwards, except at the mucronated tip, which is more or less bent down, slightly pubescent, especially when young, undulate, having a single sessile gland on the upper edge, near the base; middle rib tolerably conspicuous, branching upon its lower side; a fainter sub-simple rib occurs between this and the upper edge, and rather more than half way to this last. *Heads* solitary, or very rarely in pairs, on solitary pubescent peduncles, half the length of the leaf, and rising from the side of the bud in its axil, many-flowered, flowers yellow. *Bracteæ* greatly attenuated at the base, shortly so at the apex, marcescent. *Calyx* turbinate, five-toothed, teeth rounded and ciliated. *Corolla* twice as long as the calyx, five-cleft, segments narrow. *Stamens* very numerous, twice as long as the corolla. *Style* lateral, longer than the stamens. *Germen* oblong, slightly compressed, yellowish-green. *Graham.*

Fig. 1. Leaf or Phyllodium with its Stipules. 2. Flower and Bracteæ:—*magnified.*

Isopogon Loudoni. Mr. Loudon's Isopogon.

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Class and Order.

Tetrandria Monogynia.

(Nat. Ord.—Proteaceæ.)

Generic Character.

Perianthium quadrifidum, tubo gracili diutiùs persistente. *Squamæ* nullæ hypogynæ. *Stylus* totus deciduus. *Stigma* fusiforme vel cylindraceum. *Nux* sessilis, ventricosa, undique comosa.—Frutices *rigidi.* Folia *glabra, plana v. filiformia, divisa v. integerrima.* Capitula *terminalia, rarò axillaria.* Flores *modo densissimè imbricati, strobilo globoso ; modo fastigiati, receptaculo communi planiusculo subinvolucrato, paleis deciduis, congestis.* *Br.*

Specific Character and Synonyms.

Isopogon* *Loudoni ;* foliis lanceolatis lingulatisve integerrimis apiculo sphacelato, ramis perianthiisque glabris : apicibus laminarum sericeis, stigmate fusiformi barbato, strobilis hemisphæricis. *Br.*

Isopogon Loudoni. *D. Baxter. Br. Prodr. Fl. Nov. Holl. Suppl. prim. p.* 8.

The Genus Isopogon, of which the learned author of the *Prodromus Fl. Novæ Hollandiæ* originally described twelve species, has, by the researches of botanic travellers, of late years, and especially by those of Mr. Baxter on the south-west coast of New Holland, received an important accession to

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* From ισος, *equal,* and πωγων, a *beard,* in allusion to the nuts of the fruit being equally, or on all sides, bearded, by which character the Genus is readily distinguished from Petrophila.

to its number, by which Mr. Brown has at length been enabled to extend it to twenty-three species.

The present, a rare and handsome plant, and probably the most showy of the whole Genus, was one of the discoveries of that indefatigable botanic-voyager, whilst on his last visit to King George's Sound, in 1829; and the name he gave it, which Mr. Brown has adopted in the work above quoted, was in compliment to the respectable and laborious editor of the several well-known elaborate works on Botany and Gardening. The plant was raised from seeds, in 1830, both at Kew and in the nursery of Mr. Knight, of the King's Road; but it has hitherto only produced its flower-heads in the former garden, whence a specimen was obligingly communicated to us in the spring, which has now enabled us to publish a figure of one of the rarer of the South Australian Proteaceæ.

Descr. An upright *shrub*, rising to the height of four or five feet: *branches* few, erect, clothed with a red-brown bark, the younger ones covered thinly with short cinereous hairs. *Leaves* coriaceous, alternate, remote, or occasionally fasciculated on very short branchlets; lanceolate, linguiate, or subspathulate, entire, obsoletely and faintly three-nerved, tapering towards the base, which is somewhat dilated; apex pointed, sphacelate; the younger leaves having a thin appressed cinereous pilosity on both paginæ, which appears to wear off by age; the adult ones, which are from four to five inches long, being quite smooth. *Flower-head* terminal, solitary. *Involucre* of numerous elliptical, imbricated bractes, which are densely covered with ferruginous hairs, having at its base a ray of three or four leaves. *Flowers* in each head numerous, spreading, of a rich purple. *Perianth* long, very slender, smooth, deeply divided into four linear laminæ, which are about the length of the tube, their apices at the back being of a very dark purple, and tipped with a pencil of white silky hairs. *Anthers* four, white, bilocular, imbedded in the concave points of the laminæ of the perianth. *Style* about the length of the perianth, filiform and smooth below, widening upwards into an angular, fusiform, bearded stigma.

Rhododendron Caucasicum; *var.* straminea.
Caucasian Rhododendron; Straw-coloured *var.*

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Class and Order.

Decandria Monogynia.

(Nat. Ord.—Ericeæ.)

Generic Character.

Cal. 5-partitus. *Cor.* infundibuliformis 5-lobus. *Stam.* 5—10 declinata: *antheris* apice biporosis. *Capsula* 5-locularis, 5-valvis, ab apice dehiscens, valvarum marginibus inflexis dissepimenta formantibus: *Receptaculum* centrale. *Semina* membrana involuta.

Specific Character and Synonyms.

Rhododendron *Caucasicum;* caule diffuso, foliis ellipticolanceolatis coriaceis supra glabris venoso-reticulatis subtus brevissime ferrugineo-tomentosis margine revolutis, bracteis magnis oblongis concavis persistentibus, corolla campanulato-infundibuliformi.

Rhododendron Caucasicum. *Pall. Ross. v.* 1. *p.* 46. *t.* 31. *Bot. Mag. t.* 1145. *Ait. Hort. Kew. ed.* 2. *v.* 3. *p.* 50. *Spreng. Syst. Veget. v.* 2. *p.* 92.

Var. (β.) *staminea;* floribus stramineis, intus fulvo-maculatis.

The Rhododendron *caucasicum* would appear to be subject to much variation in the size and colour of the flowers, if we may judge from the only figures I am acquainted with, namely, that in the Flora Rossica, and that in the Botanical Magazine; in the former, which we may consider as the colour of the flowers of the *native* plant, they are comparatively small, and entirely of a delicate pink or rose-colour; in Curtis's figure they are as large as those of R. *arboreum,* pure white within, spotted with green and tinged

tinged with a deep shade of blush on the outside. In our Glasgow Botanic Garden, and some other collections in Scotland, there is cultivated as the R. *Caucasicum*, the extremely beautiful variety here figured, than which I can conceive no plant more desirable or more ornamental for an American border or shrubbery. At this season (April, 1835), notwithstanding a most unpropitious spring, our bushes, one of which is two feet high, and three feet in diameter, have the extremities of their fine leafy branches terminated with an umbel of large, beautiful, straw-coloured flowers, forming a striking contrast with the rich scarlet of other kinds of RHODODENDRON already beginning to show their blossoms in the same border. If the R. *chrysanthum* had been a common plant in our collections I should have thought our present one might have been an offspring from it and the true R. *Caucasicum*.

DESCR. A *shrub*, with spreading branches, amply clothed with *leaves* at their extremities, which are elliptical-lanceolate, glabrous, dark-green above, minutely reticulated; below rust-coloured from the presence of a copious, but extremely short, reddish-yellow down. *Flowers* in terminal *umbels*, or rather, if the pedicels were traced to the base, *racemes*: but these pedicels are wholly concealed below by the large, membranous, concave, imbricated *bractes*, which form a cone-shaped covering to them. *Pedicels* and minute five-toothed *calyx* reddish, downy. *Corolla* large, straw-coloured, between campanulated and funnel-shaped, waved, slightly irregular within, on the upper side, marked with numerous fulvous spots. *Style* and stamens declined, the latter longer than the corolla, and reddish; the former shorter than the corolla, and of an uniform pale-yellow. *Stigma* capitate, yellow-green.

Rhododendron arboreum (hybridum), Alta-clerense. High-clere hybrid *var.* of the Tree Rhododendron.

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Class and Order.

Decandria Monogynia.

(Nat. Ord.—Ericeæ.)

Generic Character.

Cal. 5-partitus. *Cor.* infundibuliformis, 5-loba. *Stam.* 5—10, declinata: antheris apice biporosis. *Capsula* 5-locularis, 5-valvis, ab apice dehiscens, valvarum marginibus inflexis dissepimenta formantibus: *Receptaculum* centrale, 5-angulare. *Semina* membrana involuta.

(*For Specific Character and Synonyms of the Species, see* tab. 3290.)

Rhododendron alta-clerense. *Lindl. Bot. Reg. t.* 1414.

For this truly splendid ornament of our gardens, it seems we are indebted to Lord Caernarvon, who suggested the idea, as stated in the Bot. Register, that "if a hybrid variety could be obtained between Rhododendron *arboreum* and some one of the hardy American species, the result would be a more robust constitution on the one hand, and a greater brilliancy of colour on the other; and also, that if the pollen of R. *arboreum* could be employed, the stature of the hybrid would also be increased." Such has been the consequence of numerous experiments that have since been tried by various persons who have fertilized the pistil of Rhododendron *Ponticum*, or some of the equally hardy American species with the pollen of R. *arboreum*, and our shrubberies and open borders can now boast of these favourite and highly ornamental shrubs, equally hardy with the R. *ponticum*, equally splendid in regard to the size and colour of the

the flowers with R. *arboreum,* and blossoming earlier by nearly six weeks than our common hardy sorts. The specimen here figured was in perfection in the Glasgow Botanic Garden the latter end of April, notwithstanding that the season was more unpropitious than usual. The under side of the leaves presents more of the rusty hue of the East Indian parent than the ALTA-CLERENSE of the Bot. Register.

HAKEA FERRUGINEA. RUSTY-STALKED HAKEA.

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Class and Order.

TETRANDRIA MONOGYNIA.

(Nat. Ord.—PROTEACEÆ.)

Generic Character.

Perianthium 4-phyllum, foliolis secundis, apicibus cavis staminiferis. *Antheræ* immersæ. *Glandula* hypogyna unica dimidiata. *Ovarium* pedicellatum, dispermum. *Stigma* subobliquum, e basi dilatata mucronatum. *Folliculus* unilocularis, ligneus, pseudo-bivalvis, loculo excentrico. *Semina* ala apicis nucleo longiore. *Br.*

Specific Name.

HAKEA *ferruginea*. *Sw. Fl. Austral. t.* 45.

This rather handsome and free-growing species has been raised from seeds sent to the Botanic Garden, Edinburgh, under the names of HAKEA *elliptica* and H. *marginata*. It differs from both these, and is, no doubt, the H. *ferruginea* of SWEET, l. c., which I had overlooked, because not quoted by BROWN, till pointed out to me by Dr. HOOKER. I can scarcely persuade myself that this plant is not described in the Supplement to the Prodr. Fl. Nov. Hollandiæ; because I understand the seeds which I received from Col. LINDSAY were collected at King George's Sound; but if he has noticed it, the form has been so much altered by cultivation, that the character will not apply. It comes nearest to Mr. BROWN's H. *repanda*, which indeed I was inclined to consider it: but Dr. HOOKER informs me that a specimen which he possesses, and which he believes to be H. *repanda*, is different. It flowers very freely in the greenhouse, and probably will thrive upon a south wall, where we have lately planted it.

DESCR.

Descr. *Shrub* erect (specimen described six feet high). *Bark* brown; on the twigs covered with brown tomentum. *Branches* long, slender, drooping, somewhat flexuous. *Leaves* (two to three inches long, eight to thirteen lines broad) largest below the origin of the branches, ovato-oblong, terminated with a short, stout, sphacelated mucro; when young, adpresso-pubescent; when old, glabrous; three to five-nerved, reticulated, obsoletely crenate, and the most ovate appearing, with their dilated bases, partly to embrace the branches. *Fascicles* axillary, sessile. *Scales* of the flower lead-brown, membranaceous, nerved, concave, ciliated, and diaphanous in the edges, the inner ones rhomboid and petiolate, the outer ovate and sessile. *Peduncle* and every part of the flower glabrous. *Style* erect, bearing the conical stigma (which is generally covered with the yellow granular pollen) beyond the recurved second segments of the four-parted perianth. *Graham.*

Pub by S Curtis Glazenwood Essex Aug.st 1 1835.

Hoya Pottsii. Mr. Potts's Hoya.

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Class and Order.

Pentandria Digynia.

(Nat. Ord.—Asclepiadeæ.)

Generic Character.

Massæ Pollinis læves, 10, erecto-conniventes. *Antheræ* membrana terminatæ. *Corona* staminea pentaphylla, foliolis depressis, angulo interiore producto in dentem antheræ incumbentem. *Cor.* rotata. *Br.*

Specific Character and Synonyms.

Hoya* *Pottsii;* foliis cordato-ovatis brevi-acuminatis supra trinerviis, corolla supra vix pubescente.
Hoya Pottsii. *Traill, in Hort. Trans. v. 7. p. 25. t. 1.?*
Loddiges, Bot. Cab. t. 1609.

Cultivated in the stove of the Bot. Garden of Glasgow, where it flowers in May. It is much to be regretted that Mr. Traill, in his otherwise valuable paper on the different species of Hoya, has not more precisely defined the characters between his Hoya *Pottsii* and H. *trinervis*. Our plant is undoubtedly the H. *Pottsii* of the Bot. Cabinet, but the colour of the flowers is different from that of Mr. Traill, and in this respect, as well as in some others, it agrees better with the *trinervis*, of which its author says, "It bears a great resemblance to H. *Potsii*, from which, however, it may be principally distinguished by its larger and thinner leaves, the veins of which are more strongly marked, and also by the yellowish colour in the centre of the crown." May not the two be varieties of one and the same plant? In ours, the old

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* Named in honour of Mr. Thomas Hoy, gardener to His Grace the Duke of Northumberland.

old leaves at the base of the plant are much thicker than the upper ones, and have the nerves more obsolete. From H. *carnosa* the species is best known by its larger, broader, three-nerved *leaves*, and the almost entire absence of down upon the upper surface of the corolla. It wholly wants the bright red spots in the inside of the crown, and the smell certainly cannot be compared to that of a "rich plum-cake, or a combination of that of honey with the almond flavour of the Peruvian Heliotrope," (to which that of H. *carnosa* is likened by Sir J. E. Smith,) but rather resembles that of strong and bad honey.

If we are correct in considering the plant to be the original H. *Pottsii*, it is a native of the vicinity of Macao, where a leaf was gathered by the zealous collector to the Horticultural Society, whose name it bears, and which, being given to Mr. Sabine, and planted, soon flourished. The H. *trinervis* was brought from China by Mr. John Damper Parks.

Descr. *Stem* long, branched, twining, the extremities frequently leafless and rooting. *Leaves* ovato-cordate with a short acumen; when old, very thick, and between fleshy and coriaceous, convex below, and pale-green, with scarcely an appearance of nerves; above concave, deep-green, with one central and two lateral nerves, the middle one sometimes sending out very obscure lateral oblique ones, the margin slightly revolute. *Petioles* rounded, short, very thick; when old, clothed with a sort of pale-brown bark. *Peduncle* from the side of one of the petioles at its base, two inches long, bearing a compact almost globose *umbel* of flowers. *Calyx* with five short, broadly ovate teeth. *Corolla* rotate, of five broadly ovate, acute, very pale yellow-green lobes, quite glabrous below, above so slightly downy that the pubescence can only be seen by the assistance of a microscope. *Crown* of five large, depressed, fleshy, ovate, spreading, white leaves, between which the colour is orange.

Orchis tephrosanthos; *var.* densifolius. Narrow-lipped Military Orchis; Crowded-flowered *var.*

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Class and Order.

Gynandria Monandria.

(Nat. Ord.—Orchideæ.)

Generic Character.

Corolla ringens. *Labellum* basi subtus calcaratum. *Glandulæ* (1—2.) pedicellorum pollinis inclusæ cucullo unico. *Br.*

Specific Character and Synonyms.

Orchis *tephrosanthos;* labello tripartito, laciniis linearibus intermedia bifida cum mucrone interjecto, petalis acutis conniventibus, cornu subincurvo germine duplo breviore, bracteis brevissimis.
Orchis tephrosanthos. *Vill. Delph. v. 2. p. 32. Desf. Atl. v. 2. p. 318. Hook. in Fl. Lond. N. S. cum Ic.*
Orchis militaris. *Engl. Bot. t. 1873.*
Orchis militaris? *Linn. Sp. Pl. p. 1334.*
Orchis simiam referens. *Vaill. Bot. Par. t. 31. f. 25, 26. (excellent).*
(β.) spica multiflora, foliis latioribus. *Tab. nostr. 3426.*
Orchis simia. *De Cand. Fl. Fr. ed. 3. v. 2. p. 249.*

This extremely handsome Orchis has been received at the Glasgow Botanic Garden, from the Continent of Europe, under the name of O. *simia;* but a careful comparison with the rare O. *tephrosanthos* of the south of England will show that, notwithstanding its greater size and beauty, it can only be considered a luxuriant state of that plant. It seems to be a species that has been very little understood, and consequently that has received different appellations, besides those quoted above; such as, for example, O. *zoophora*, Thuill., O. *cinerea*, Schrank, O. *cercopitheca*, Poir., &c. De Candolle

Candolle has certainly given a wrong synonym in quoting Haller, Helv. n. 1275. t. 30, which has a lip quite different from our plant, and is in reality O. *acuminata* of Desfontaines. I scarcely know whether to quote the O. *tephrosanthos*, β. of Ker. in Bot. Reg. p. 375, because of the very sharp segments of the lip, and waved leaves, which is, moreover, far inferior, in point of beauty, to the present individual. Its flowering season is in May.

Descr. *Bulbs* two, roundish-ovate. *Stem* a foot high in our plants. *Leaves* oblong, or oblongo-lanceolate, somewhat acute, striated, pale-green above, paler still, and somewhat glaucous beneath; they are mostly confined to the lower part of the stem. *Spike* oval, of numerous, crowded, handsome, fragrant *flowers*. *Sepals* and *petals* purplish-white, spotted, all ovate and much acuminated, forming a helmet over the *column*. *Lip* purple, variegated with white, and studded on the upper side with darker, red-purple, chrystalline points, three-lobed, the middle lobe bipartite, with a mucro between; all the lobes linear, obtuse, and curved upwards. *Spur* short, decurved, swollen towards the apex. *Bracteas* small, much shorter than the twisted *germen*.

Fig. 1. Side view of a Flower. 2. Front view of a Lip, with its Spur:—*magnified.*

ERICA RECURVATA. DROOPING ROUND-HEADED HEATH.

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Class and Order.

OCTANDRIA MONOGYNIA.

(Nat. Ord.—ERICINEÆ.)

Generic Character.

Cal. 4-sepalus inferus. *Cor.* 4-fida. *Stam.* receptaculo inserta. *Antheræ* bifidæ. *Caps.* 4-locularis.

Specific Character and Synonyms.

ERICA *recurvata;* foliis 6-fariis linearibus flexuosis patentibus obscure denticulatis glabris, floribus terminalibus dense capitatis involucratis nutantibus, calycis laciniis subulatis appressis tubi longitudine, corollæ tubo ovato-cylindraceo (albo) laciniis erectis conniventibus intense nigro-fuscis, antheris bipartitis muticis, stylo longissime exserto.

ERICA recurvata. *" Andr. Heath. v. 4." Lodd. Bot. Cab. t.* 1093. *Spreng. Syst. Veget. v. 2. p.* 195.

EURYLOMA recurvata. *Don, Syst. of Gard. et Bot. v. 3. p.* 817.

Among the numerous species of Cape *Heath* which adorn our collections, there are few that are more peculiar, as to aspect, or more readily distinguished by character, than the present, which produces its singular blossoms in the heathery of the Glasgow Botanic Garden, in the month of May. The foliage is of a delicate green colour, and the leaves, at the extremity of the branches, form a sort of starry crown around the dense heads of flowers, which are white below, and afford a striking contrast to the deep brown, almost black, connivent segments of the corolla, and the bright-red, much protruded styles.

I am too ignorant of the structure of the flowers of this most extensive and highly beautiful Genus of plants, to be able to form an opinion of the merits of Mr. Don's arrangement of it into new Genera. In the present instance, I fear the species is not ranked, by our author, with those to which it is naturally allied; nor does it accord in several particulars with the Generic character laid down for Euryloma, which should have "a foliaceous *calyx*, a salver-shaped *corolla*, with an elongated, filiform or ventricose *tube*, and a dilated *limb*: *filaments* dilated, channelled; and *leaves* which are adpressed;"—marks which do not exist in our plant.

Descr. With us Erica *recurvata* forms a *shrub*, about two feet high, much divided above into branches that are rather stout and flexuous, or almost tortuous, clothed with delicate, pale-green, spreading, sexfarious, narrow, linear *leaves*, of which the upper surface is plane, the lower keeled and marked by a furrow in the middle; the margin slightly denticulate, every where glabrous. *Flowers* terminal on short branches, ten to sixteen collected together in a dense drooping head, slightly adhering by means of a viscid substance which invests them, and surrounded by a ray of leaves, which constitutes a kind of *involucre*. *Pedicels* exceedingly short, bearing two or three linear-subulate, white bracteas, of which the outer and longer ones are often tipped with green. *Cal.* four-partite; *segments* lanceolato-subulate, appressed, a little scabrous at the margin, pure white. *Corolla* between ovate and cylindrical, about half an inch long, white; the segments alone, which are erect, or rather connivent, deep brownish-black, acuminated. *Anthers* included, bipartite, muticous; the openings extending almost the whole length of the cells. *Germen* subglobose, four-lobed: *Style* twice as long as the corolla, white below, bright-red above: *Stigma* obtuse, scarcely dilated.

Fig. 1. Flower with Bracteas. 2. Stamens. 3. Anthers. 4. Pistil. 5. Portion of a Leaf seen from above. 6. Ditto from below.—*Magnified.*

VACCINIUM ALBIFLORUM. WHITE-FLOWERED WHORTLE-BERRY.

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Class and Order.

DECANDRIA (OCTANDRIA *alior.*) MONOGYNIA.

(Nat. Ord.—VACCINIEÆ.)

Generic Character.

Cal. 4—5-dentatus. *Cor.* urceolata s. campanulata, limbo 4—5-fido reflexo. *Antheræ* bicornes vel muticæ. *Bacca* 4—5-locularis.

Specific Name and Character.

VACCINIUM *albiflorum;* ramis floriferis subaphyllis, racemis subcorymbosis secundis nutantibus bracteatis (bracteis valde deciduis), corollis lato-ovalibus, calycibus patenti-reflexis, foliis ovali-lanceolatis obscure serrulatis membranaceis deciduis subtus costa nervisque præcipue patenti-pilosis, germine omnino infero.

The affinity of the present very pretty species of WHORTLEBERRY is undoubtedly with the V. *corymbosum* of LINNÆUS and American authors; so much so, indeed, that I had myself, at one time, considered it only a variety, but the nature of the germen, I think, forbids such an union; for, in the last-mentioned species it is *half superior;* in this wholly inferior, presenting a flat or convex surface at the top, where the style is inserted; and this, coupled with some other distinctive marks, such as the reflexed and thinner and reflected teeth of the calyx, broader corolla quite even on the surface, stouter style, more deciduous bracteas, and more hairy leaves in our V. *albiflorum,* have induced me to think that the two are permanently distinct. At any rate, after having given a faithful representation with dissections of both (for the V. *corymbosum* will appear in a forthcoming number),

number), I must leave the reader to judge for himself, only observing that, if, as is more than probable, it is some described VACCINIUM, the characters I have above alluded to are no where expressed. The figure of V. *amænum* of Bot. Reg. t. 400, and particularly of Bot. Rep. t. 138, are very like our plant: but Mr. DON, in the Cycl. of Gard. and Bot. has decidedly referred them to the V. *corymbosum*, as Sir JAMES SMITH has the *amænum* of Hort. Kew., upon the authority of original specimens. It may possibly be the V. *album* of LAM. (not of LINN., for that Sir JAMES SMITH has ascertained to be XYLOSTEUM *ciliatum*, β. *Ph.* nor of PURSH, which is V. *accinium stamineum*); but the description is too vague to allow a correct judgment to be formed. Thus circumstanced, however unwillingly, I am obliged to give a new name to our present plant, and that one expressive of a mark by which it is at once distinguishable from its near ally, V. *corymbosum*. It has been received at the Glasgow Botanic Garden, from North America, and it flowers in May.

DESCR. A small *shrub*, with spreading, green, rounded *branches*, of which the younger ones are hairy. *Leaves* oval-lanceolate or lanceolate, nearly sessile, slightly acuminate, membranaceous, wavy, minutely serrulated, and ciliated at the margin, beneath more or less hairy, especially on the midrib and nerves, with spreading hairs. *Flowers* in short corymbose, bracteated *racemes* of the preceding year's branches, which are either leafless, or which throw out short leafy branches from immediately below the racemes. *Bracteas* quickly deciduous. *Calyx* of five, *spreading*, almost *reflexed*, membranaceous, green teeth, sometimes tinged with brown. *Corolla* broadly oval, dingy white, scarcely at all furrowed, the mouth very slightly contracted, and having five small, recurved teeth. *Stamens* ten: *filaments* short, broad, hairy on the outside and at the margins: *Anthers* acuminated, bifid. *Germen* wholly inferior, its summit presenting a flattened, or slightly convex disk: *Style* longer than the stamens, slenderer than that of V. *corymbosum*.

Fig. 1. Flower. 2. Stamens. 3. Side view of the Pistil and Calyx. 4. Front view of ditto, showing the flattened or slightly convex summit of the Germen:—*magnified.*

VACCINIUM CÆSPITOSUM. DWARF TUFTED WHORTLE-BERRY.

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Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—VACCINIEÆ.)

Generic Character.

Cal. 4—5-dentatus. *Cor.* urceolata s. campanulata, limbo 4—5-fido reflexo. *Antheræ* bicornes vel muticæ. *Bacca* 4—5-loculares.

Specific Character and Synonyms.

VACCINIUM *cæspitosum;* pusillum cæspitosum, foliis obovatis basi attenuatis membranaceis serratis reticulatis glabris nitidiusculis deciduis, pedunculis subsolitariis unifloris, corollis urceolatis, calyce brevi, antheris bisetosis.

VACCINIUM cæspitosum. *Mich. Am. v.* 1. *p.* 234. *Pursh, Fl. Am. v.* 1. *p.* 288. *Hook. Fl. Bor. Am. v.* 2. *p.* 33. *t.* 126.

This very pretty dwarf species of Whortle-Berry was long only known to Botanists by MICHAUX's very imperfect description, made from specimens he found about Hudson's Bay, till Mr. MENZIES supplied our Herbaria from the North-west coast of America, Mr. DOUGLAS from the West side of the Rocky Mountains, and Mr. DRUMMOND, from the East side (nearly in the same latitudes, 52° North), as well as from Lake Winipeg and the Sashatchawan. The plants found in the Rocky Mountains being in fruit, Mr. DRUMMOND has had the satisfaction of introducing the plant to our gardens. The drawing here given was made from specimens in the Glasgow Botanic Garden, where it bears its numerous and exceedingly delicate and graceful blossoms

soms in the month of May. In the native specimens, the blossoms and berries seem to be quite as numerous as the leaves. On one specimen, scarcely more than two inches high, but much spreading, I have counted upwards of thirty flowers.

Descr. The main stem of this plant creeps under ground, and in its native country, sometimes to the length of several inches, from its upper extremity sending up several short, tufted *branches*, from two to four inches high, woody and greenish brown, rounded. *Leaves* copious, alternate, obovate, attenuated below, distinctly serrated, glabrous, somewhat shining, much and conspicuously reticulated, especially beneath, where the colour is paler, but not glaucous. From the axils of the leaves the *peduncles* spring, solitary, or rarely two together, drooping, short, single-flowered, accompanied by one or two concave, membranous, deciduous *bracteas* at the base. *Calyx* obscurely five-lobed. *Corolla* urceolate, very delicate, white, with a tinge of deep blush, the mouth contracted, and having five, recurved, blunt, teeth. *Stamens* ten: *Anthers* with the cells much prolonged upwards, and bearing two long, slender awns at the back. *Berry* globose, glaucous, blue-black.

Fig. 1. Leaf. 2. 3. Flowers. 4. Stamen. 5. Pistil and Calyx. 6. Fruit *(nat. size)*: all but fig. 6 *magnified.*

CRESCENTIA CUJETE. CALABASH TREE.

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—BIGNONIACEÆ.)

Generic Character.

Cal. bipartitus, æqualis, deciduus. *Cor.* subcampanulata; tubo brevissimo; fauce magna, ventricosa, limbo 5-fido inæquali. *Stam.* 4, didynama, cum rudimento quinti: *Bacca* cucurbitina, unilocularis, cortice solido, interne pulposa polysperma.

Specific Character and Synonyms.

CRESCENTIA * *Cujete;* foliis fasciculatis lato-lanceolatis inferne attenuatis.

CRESCENTIA Cujete. *Linn. Sp. Pl. p.* 872. *Jacq. Am. p.* 175. *t.* 111. *Spreng. Syst. Veget. v.* 2. *p.* 842.

CRESCENTIA arborescens, &c. *Br. Jam. p.* 265.

ARBOR cucurbitifera Americana, &c. *Sloane, Jam.* 2. *p.* 172.

The *Calabash* tree was cultivated by the Earl of PORTLAND in this country, according to the Hortus Kewensis, so long ago as the year 1690; and branches of it are not unfrequently sent over to our Collections from the West India Islands, for the sake of the epiphytes with which they are invested, and these being fixed in the earth, readily vegetate: but I was not aware that any had produced blossoms in our stoves, until CHARLES HORSFALL, Esq. obligingly sent me a flower which was perfected in his garden

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* So named in honor of PETER CRESCENTIO, an Italian writer on Agriculture.

garden at Liverpool, accompanied by a drawing of the plant from the pencil of Mrs. Horsfall. An excellent drawing of a flowering plant has likewise been sent to me from Antigua, by Dr. Nicholson, which has materially assisted me in completing the present figure. The fruit is copied from that given in the Flore Médicale des Antilles, but evidently much diminished in size, since it is described by authors as being sometimes much larger than the human head. Mr. Horsfall's plant is growing so vigorously, and has borne flowers so readily, we are not without hopes that it may ere long produce fruit also: and it is this part which is well known in the West Indies and all the warmer parts of America, under the name of *Calabash (Calabáça,* a gourd, or pumpkin*, from its resemblance to that fruit,) and which they employ for so many useful purposes. The skin being removed from without, and the pulp with the seeds from within, the hard, woody shell alone remains, and serves, according to its size, for various kinds of domestic utensils, such as water-cans, goblets, coffee-cups, and even for kettles to boil water in "it being so thin, hard, and close-grained, as to stand the fire several successive times before it is destroyed." The outside is often polished by the Indians, and carved and stained with various figures of beautiful execution. Various forms are given to the fruit, by ligatures applied while the fruit is still growing upon the tree, and so great a variety of purposes is it made to serve, that it sometimes constitutes almost the sole article of furniture of the Carib Indians. Much of their food is kept in Calabashes, and a small piece of the shell of the same fruit serves them to take it out with. The pulp of the fruit is considered in the country a sovereign remedy for several disorders, both internal and external. Dr. Wright recommends it as an excellent poultice for bruises and inflammations.

The wood of the tree is described as being very tough and flexible, and various articles of carpentery work are made of it; such as stools, chairs, saddle-trees, crooks for mules, shafts, and handles for tools, &c.

Descr.

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* I am aware that Mr. Lunan, in the Hortus Jamaicensis, expresses a different opinion, and supposes that "it derives its name from being as big as a man's head, which the Spaniards call *calabash*." But I believe it will be found, that the term is only applied in contempt; as *Cascos de Calabáça, Calabash-skull,* empty-headed; having no more brains than a *pumpkin-shell.*

Descr. A *Tree*, according to Jacquin, twenty feet in height, readily distinguished from all others by its peculiar habit: for it sends out large, horizontal, scarcely divided *branches*, which bear fascicles of leaves at various distances. These *leaves* are from four to six inches in length, broadly-lanceolate, somewhat acute, entire, tapering at the base, but destitute of petiole. *Peduncles*, in general from the older portions of the trunk or branches, solitary, rarely two or three together, decurved, bearing a single, pendent *flower* of a large size, and, though varying somewhat in colour, generally of a yellowish-green, more or less streaked or veined with reddish lines. The *calyx* is large, of two roundish, or oval, green, concave lobes. *Corolla* large, somewhat campanulate, with a remarkable constriction below the middle, above which it becomes ventricose, and at the mouth cut into five, much crisped and waved, sharp, but rather unequal segments, which are at length reflexed: it does not readily fall away, but decays upon the peduncle, and then gives out a very disagreeable smell. *Stamens* four, didynamous, sometimes five, shorter than the corolla. *Anthers* of two oblong lobes, spreading at their base. *Germen* ovate, surrounded by a large, fleshy, yellowish ring: *Style* rather longer than the corolla: *Stigma* two-lobed. *Fruit*, according to authors, an oval or round berry, large, externally coriaceous, one-celled, containing a copious pulp, in which are imbedded several cordate, compressed *seeds*, which are said to have two cells.

The Plate represents a portion of a Branch, with Leaves and Flowers of the *nat. size*. 1. Fruit smaller than nature.

Pæonia Russi. Crimson Pæony.

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Class and Order.

Polyandria Digynia.

(Nat. Ord.—Ranunculaceæ.)

Generic Character.

Cal. 5-sepalus, foliaceus, inæqualis. *Pet.* 5—10, suborbiculata. *Stam.* numerosa. *Discus* carnosus, ovaria cingens. *Carpella* 2—5, grossa, stigmatibus bilamellatis crassis instructa, in folliculos capsulares conversa. *Semina* subglobosa, nitida.—Radices *fasciculatæ*. Folia *caulina biternatim-secta*. Flores *ampli albi aut purpurascentes*. *D C.*

Specific Character and Synonyms.

Pæonia *Russi;* herbacea, carpellis pilosis recurvatis, foliorum segmentis ellipticis integris subtus vix pubescentibus.

Pæonia Russi. "*Biv. Man. Sic. 4. p.* 10." *De Cand. Prodr. v.* 1. *p.* 67. *Spreng. Syst. Veget. v.* 2. *p.* 615. *Sw. Br. Fl. Gard. t.* 122.

So many hybrids and varieties of Pæony are now cultivated in our gardens that it would puzzle the most acute Botanist to mark the limits of the species. The present plant goes by the name I have here adopted in our gardens, and I have no reason to think that it is other than the one intended by Bivone. But that author himself observes "P. *humili affinis:*" and any one who will be at the trouble of comparing our present figure with the one given at t. 1422 of the present work, cannot fail to observe a very great similarity. Our plant has, however, the advantage in respect to depth and brilliancy of colour; and it is well worthy of a place in every collection.

Our drawing was made from a specimen that flowered in a pot placed in a cool frame in the month of May. The stem was not above a foot in height, and it bore but one flower.

Cratægus coccinea. Large-flowered American Whitethorn.

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Class and Order.

Icosandria Di- Pentagynia.

(Nat. Ord.—Rosaceæ.)

Generic Character.

Cal. tubus urceolatus, limbus 5-fidus. *Pet.* patentia obcordata. *Ovarium* 2—5 loculare. *Styli* totidem glabri. *Pomum* carnosum ovatum dentibus calycinis vel disco incrassato clausum, putamine osseo.—Frutices *spinosi.* Folia *angulata vel dentata.* Corymbi *terminales.* Bracteæ *subulatæ deciduæ.*

Specific Character and Synonyms.

Cratægus* *coccinea;* spinosa, foliis cordato-ovatis angulato-lobatis acute serratis glaberrimis sublonge petiolatis, petiolis segmentisque calycinis subulatis glandulosis, floribus pentagynis.

Cratægus coccinea. *Linn. Sp. Pl. p.* 682. *Mich. Am. v.* 1. *p.* 288. *Pursh, Fl. Am. v.* 1. *p.* 337. *Ell. Carol. v.* 1. *p.* 553. *Torrey, Fl. of Un. St. v.* 1. *p.* 475. *Hook. Fl. Bor. Am. v.* 1.

This is an extremely beautiful plant, and assuredly one of the greatest ornaments of our shrubberies, loaded as it is in the month of May with its large clusters of white, but scarcely fragrant blossoms. The leaves too are copious, and of a delicate yellowish-green, much lobed and finely serrated at the margin. It is a native of North America, from Canada to the Southern United States.

Descr.

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* Named from κρατος, *strength,* in allusion to the extreme hardness of the wood.

Descr. In our Botanic Garden, this *Whitethorn* forms a large *shrub*, I might almost say a *tree*, from its being eighteen to twenty feet high, with numerous more or less spreading *branches*, clothed with a small, dark purplish-brown, glossy *bark*, and here and there bearing rather long and straight but strong thorns, chiefly on the older branches. *Leaves*, on slender, glandular petioles, which are about an inch and a half long, broadly ovate, approaching to cordate, quite glabrous, membranaceous, with many acute lobes, and finely and sharply serrated: the nerves oblique, parallel, reaching to the end of each lobe. *Corymbs* compound, terminal on the numerous, short, lateral branches, of several large, white *flowers*. *Calyx* of five spreading, subulate segments, glandular at their margins, the glands stipitate. *Corolla* of five, very concave, somewhat crisped and nearly orbicular *petals*. *Stamens* generally ten, about as long as the petals. *Anthers* oval-oblong, at first deep pink, afterwards greenish. *Germen* oblong-turbinate, smooth and quite glabrous in our specimens. *Styles* five. *Stigmas* capitate.

Pub.by S. Curtis. Glazenwood, Essex. Sept.r 1. 1835.

VACCINIUM CORYMBOSUM. MANY-FLOWERED WHORTLE-BERRY.

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Class and Order.

DECANDRIA (OCTANDRIA *alior.*) MONOGYNIA.

(Nat. Ord.—VACCINIEÆ.)

Generic Character.

Cal. 4—5-dentatus. *Cor.* urceolata seu campanulata, limbo 4—5-fido reflexo. *Antheræ* bicornes. *Bacca* 4—5-locularis.

Specific Character and Synonyms.

VACCINIUM *corymbosum;* ramis floriferis plerumque aphyllis, racemis subcorymbosis secundis nutantibus bracteatis, corollis lato-cylindraceo-ovatis, calycibus fere erectis, foliis elliptico-lanceolatis obscure serrulatis membranaceis deciduis (nervis subpubescentibus exceptis) glaberrimis, germine semisupero.

VACCINIUM corymbosum. *Linn. Sp. Pl. p.* 499. *Pursh, Fl. Am. v.* 1. *p.* 286. *Hook. Fl. Bor. Am. v.* 2. *p.* 31. *Donn, Syst. of Gard. et Bot. v.* 3. *p.* 853.

VACCINIUM amænum. *Ait. Hort. Kew. ed.* 2. *v.* 2. *p.* 358. *Bot. Reg. t.* 400 ? *Andr. Bot. Rep. t.* 138 ?

VACCINIUM dimorphum. *Mich. Am. v.* 1. *p.* 231.

(β.) *fuscatum,* corollis subcylindraceis pulcherrime roseo-vittatis.

VACCINIUM fuscatum. *Pursh Am. Sept. v.* 1. *p.* 287. *Bot. Reg. t.* 302.

VACCINIUM formosum. *Andr. Bot. Rep. t.* 97.

VACCINIUM virgatum. *Wats. Dendr. t.* 33. *(non Ait.)*

A very abundant species of *Whortle-berry* throughout almost the whole of North America, but subject, in its native country, as it would appear from the accounts of American

American authors, and undoubtedly, as cultivated in our gardens and our shrubberies, to much variation: so that I entirely agree with the view Sir James Smith has taken of this subject, and gladly unite the *amænum*, *dimorphum*, *virgatum*, (at least of Watson,) and *fuscatum* with the present species, to which I have added the V. *Marianum* of Mr. Watson. All the kinds, however, are well worthy a place in the garden; being quite hardy, and bearing copious blossoms during the month of May. The beauty of the flowers is best seen by lifting up the branches; for in consequence of their drooping position, they are in a measure concealed from the spectator by the pedicels, calyces, and bracteas.

Descr. A spreading *shrub*, about four feet high, with rounded, glabrous *branches* of a purplish-green colour. *Leaves* deciduous, elliptical-lanceolate, nearly entire, of a tender green tinged with brown, glabrous or with only the midrib and a few of the nerves (principally beneath) clothed with short, appressed hairs. *Flowers* arranged in subcorymbose, sessile *racemes*, upon rather long, leafless branches, with many deciduous bracteas. *Pedicels* all curved downwards and secund. *Calyx-segments* nearly erect, often tinged with purple, almost half-inferior. *Corolla* ovato-cylindrical, in bud having five conspicuous angles, which in the full flower are obsolete, white tinged with rose colour. *Stamens* ten: *Filaments* broad, incurved, hairy on the outside and at the margins, glabrous within: *Anthers* with two cells, much elongated upwards, destitute of horns. *Germen* with nearly the upper half free, convex: *Style* rather thick, shorter than the corolla, but longer than the stamens.

Fig. 1. Flower, with its pedicel and bracteas. 2. Calyx and Pistil. 3. The same, with a portion of the Calyx cut away, to show the half-superior Germen. 4. Back and front view of a Stamen: *magnified*.

Pub. by S. Curtis, Glazenwood, Essex. Sept^r 1. 1835.

Swan. Sc.

VACCINIUM PENNSYLVANICUM. SMALL WILLOW-LEAVED WHORTLE-BERRY.

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Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—VACCINIEÆ.)

Generic Character.

Cal. 4—5-dentatus. *Cor.* urceolata seu campanulata, limbo 4—5-fido reflexo. *Antheræ* bicornes. *Bacca* 4—5-locularis.

Specific Character and Synonyms.

VACCINIUM *Pennsylvanicum;* humile, ramis floriferis sæpissime foliosis, racemis subcorymbosis secundis nutantibus bracteatis, corollis brevi-cylindraceo-campanulatis, calycibus erectis, foliis lanceolatis acutis glaberrimis serrulatis nitidis (subtus præcipuæ) subciliatis deciduis, germine disco elevato medio depresso.

VACCINIUM Pennsylvanicum. *Lam. Enc. v.* 1. *p.* 72. *Mich. Am. v.* 1. *p.* 232. *Torr. Fl. of Un. St. v.* 1. *p.* 416. *Hook. Fl. Bor. Am. v.* 2. *p.* 32.

VACCINIUM tenellum. *Ait. Hort. Kew. v.* 2. *p.* 12? *Pursh, Fl. Am. v.* 1. *p.* 288.

I noticed in my Flora Boreali-Americana the affinity of this very pretty plant with VACCINIUM *corymbosum:* it is, however, I believe, perfectly distinct, at all times a dwarf species, having peculiarly narrow, lanceolate, minutely, but distinctly serrulated leaves, quite destitute of hairs, except that the margin is a little ciliated, densely placed flowers, on very short racemes, and what I consider of greater importance, a shorter and more campanulate corolla, with a longer calyx, and a germen which is not at all superior, but presents merely an elevated, concave disk above

above its point of union with the calyx. It is very common in the Northern States of America, and in Canada, and bears a fruit which, according to American writers, is very much esteemed.

Descr. A low dwarf *shrub* in our gardens, rarely rising more than from eight or ten inches to a foot high, the young *branches* greenish, and rough with very minute warts, and slightly downy. *Leaves* small, lanceolate, glabrous, somewhat shining, conspicuously so beneath, membranaceous, serrulated and minutely ciliated at the margin. *Flowers* in dense, crowded, many-flowered, secund and drooping bracteated racemes. *Pedicels* very short. *Calyx* of five, rather deep, erect lobes. *Corolla* shortly cylindrical, approaching to campanulate, the mouth open, with five, recurved, blunt teeth: the colour a pale greenish-white more or less tinged with red, sometimes in streaks.

Fig. 1, 2. Flowers. 3. Stamen. 4. Pistil and Calyx. 5. Leaf: *magnified.*

Cassia glandulosa. Glandular-leaved Cassia.

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Class and Order.

Decandria Monogynia.

(Nat. Ord.—Leguminosæ.)

Generic Character.

Sepala 5 vix basi coalita plus minus inæqualia. *Pet.* 5 inæqualia. *Stamina* 10, libera inæqualia, 3 inferiora longiora; 4 media brevia, recta; 3 superna antheris abortivis difformibus. *Antheræ* apice dehiscentes. *Ovarium* stipitatum, sæpe arcuatum. *Legumen* varium.—Arbores, frutices, *aut* herbæ. Folia *simpliciter et abrupte pinnata.* Petioli *sæpe glanduliferi.* Foliola *opposita.*

Specific Character and Synonyms.

Cassia* *glandulosa;* fruticosa, foliis 14—18-jugis, foliolis oblongis mucronatis basi obliquis superioribus sensim minoribus subtus rachide ramisque pubescenti-pilosis, glandula pedicellata infra par infimum, et non raro aliis infra paria secunda et tertia minus pedicellata, stipulis lato-subulatis, pedunculis subternis unifloris florem subæquantibus.

Cassia glandulosa. *Linn. Sp. Pl. p.* 542. *De Cand. Prodr. v.* 2. *p.* 503? *Spreng. Syst. Veget. v.* 2. *p.* 342?

I dare not venture to introduce other synonyms of this very pretty species of Cassia, which I quite believe to be the plant described by Linnæus under the above name, and

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* Said to be derived from the Hebrew word *Ketzioth,* rendered by Κασιαν, in the Greek Septuagint, and latinized by *Cassia.*

and which I have received from Jamaica, Trinidad, St. Vincent's, and other of the West Indian Islands, whence also the seeds were transmitted from which plants were raised in the stove of the Botanic Garden of Glasgow. It is a plant of considerable elegance of foliage, and bearing its copious blossoms for at least nine months out of the twelve. Professor De Candolle's character of C. *calycioides* agrees as well with our plant, as does that of his C. *glandulosa;* but the figure of M. Colladon has the leaves considerably different from ours.

Descr. In our stove, this plant forms a *shrub* four to five feet high, clothed with brown *bark,* and bearing, especially at the top, many long, rather straggling and *pendent branches;* thus, as it were, presenting the graceful foliage and bright coloured flowers more immediately to the spectator. *Young branches* green and downy. *Leaves* alternate, distichous, pinnated with from twelve to eighteen pairs of oblong, mucronated, nearly sessile *leaflets,* oblique at the base, marked with closely-placed, oblique veins, downy beneath and at the margin with appressed hairs. *Stipules* appressed, broadly subulate, slightly hairy. *Peduncles* axillary, two or three rising from the same point, single-flowered, and about as long as the flowers, with several small, acuminated *bracteas* at the base, and a pair of opposite ones a little below the flower. *Calyx* of five subulate *leaflets,* almost as long as the petals. *Petals* five, very unequal, spreading, concave, full yellow: four nearly of the same size, and obovate, the fifth much larger, obcordate, and distinctly clawed. *Stamens* ten; of which seven are short, yellow, and abortive; three with long purple-brown *anthers.* *Germen* linear, hairy, gradually attenuated into the curved, glabrous *style.*—The fruit of our cultivated plant I have not seen; but that of my native specimens is about an inch and a half long, linear, compressed, dark brown, hairy, with the margins thickened.

Fig. 1. Base of the Petiole with Leaflets and Glands: *magnified.*

Pub. by S. Curtis Glazenwood Essex Sept.r 1 1835.

Sida inæqualis. Oblique-leaved Sida.

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Class and Order.

Monadelphia Polyandria.

(Nat. Ord.—Malvaceæ.)

Generic Character.

Cal. nudus, 5-fidus, sæpe angulatus. *Stylus* apice multifidus. *Carpella* capsularia, 5—30 circa axim verticillata, plus minusve inter se coalita, 1-locularia, mono- aut oligosperma, apice mutica aut aristata. *D C.*

Specific Character and Synonyms.

Sida *inæqualis ;* fruticosa, foliis cordato-ovatis acuminatis, basi inæqualibus crenulatis utrinque hirtis, pedunculis petiolos longe superantibus apice geniculatis, calycibus basi productis, corollis campanulatis, capsulis subinflatis.

Sida inæqualis. *Link et Otto, Berl. t.* 34. *Spreng. Syst. Veget. v.* 3. *p.* 117.

We received this plant from the Berlin Botanic Garden in 1829, under the name of Sida *inæqualifolia*. It flowered freely for the first time in the stove in the Royal Botanic Garden, Edinburgh, in May, 1835. It is said to be a native of Brazil.

Descr. *Shrub* erect (in the specimen described slender, and nearly seven feet high). *Bark* light gray, on the young shoots green, and covered with short, harsh, glandular pubescence. *Petioles* (one to two inches long) alternate, spreading, round, having similar pubescence to the twigs, swollen at the apex. *Leaves* (four to seven inches long, two to three inches broad) slightly undulate, having on both sides a short, harsh pubescence, bright green and shining above, paler and without lustre below; where in the

the young state it is at first white, then becoming somewhat rusty, an appearance of which scarcely a trace remains in the adult leaves, cordato-ovate, unequal at the base, acuminate, crenulate, middle rib and veins prominent on both sides, especially behind. *Peduncles* (about two inches long) lateral, subtended by a lanceolate, nerved, pubescent, deciduous bractea, round, geniculate near the apex, with pubescence similar to that on the petioles. *Calyx* five-cleft, segments ovate, acute, with ferruginous pubescence, somewhat keeled, and keel produced at the base. *Corolla* (an inch and a half long, and when fully expanded, two inches across) white, campanulate, *petals* clawed, orbiculato-ovate, delicately glanduloso-pubescent on the outside, glabrous within, shining only at the claws, many-nerved, nerves very prominent on the outside, dichotomous towards their terminations, and with smaller reticulating branches along their sides. *Stamens* and *styles* equal to the height of the petals, glabrous; *anthers* small, yellow, *pollen granules* yellow, minute, globular. *Graham.*

W.m Fitch Del.t

Lith. by ... Glasgow ... 1st ... 1853

W.m ...

Canna glauca, γ, rubro-lutea. Glaucous-leaved Indian-Reed ; reddish yellow-flowered *var*.

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Class and Order.

Monandria Monogynia.

(Nat. Ord.—Canneæ.)

Generic Character.

Anthera simplex, filamenti margini adnata. *Stylus* crassus, claviformis. *Stigma* obtusum. *Caps.* 3-locularis. *Semina* gibbosa, numerosa.

Specific Character and Synonyms.

Canna * *glauca;* foliis elliptico-lanceolatis valde acuminatis glaucis, corollæ laciniis exterioribus erectis, labio superiore trilobato lobis tribus ovatis strictis inferiore indiviso recurvo.

Canna glauca. *Willd. Sp. Pl. v.* 1. *p.* 4. *Rosc. Linn. Trans. v.* 8. *p.* 339. *Scit. Pl. cum Ic. Sm. Ex. Bot. p.* 83. *t.* 102. *Roem. et Schult. v.* 1. *p.* 13. *Spreng. Syst. Veget. v.* 1. *p.* 7.

(β.) *rufa ;* corollis rubro tinctis ; labello variegato integerrimo. *Sims, Bot. Mag. t.* 2302.

(γ.) *rubro-lutea ;* florum basi labioque inferiore rubris, labio superiore luteo. (Tab. nostr. 3437.)

The Glasgow Botanic Garden is indebted for the possession of this plant to Mr. M'Fadyen, who sent it from Jamaica. It may be reckoned among the handsomest of the Genus, especially if the foliage be considered as well as the flower, the leaves being remarkably elongated, and of a delicate

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* From *Can,* or *Cana,* a *reed,* in Celtic, and that from *Cana,* a watery place, in the same language.

delicate glaucous hue, while the large blossoms are varied with red or yellow. Notwithstanding its superiority in point of beauty over the *Canna glauca* β, figured at t. 2302 of this work, I dare not venture to consider it other than a variety. It flowers in the stove in the month of August.

Descr. *Stems* four to five feet in height. *Leaves* of a singularly light and glaucous hue, the lower ones very long and lanceolate, much attenuated at the base, the upper ones gradually shorter and broader, elliptical-lanceolate, all of them sharply acuminated, and having a slender, scariose, reddish-brown margin. *Flowers* in a lax, compound spike. *Calyx* of three, convolute, erect leaves. *Corolla* with the upper lip in three deep, spathulate, ascending divisions, of a yellow colour, reddish below: *lower lip* of one revolute, linear, reddish-yellow segment. *Filament* of the same colour, petaloid, the apex recurved. *Style* much compressed, yellow below, red at the extremity.

Fig. 1. Flower, from which the upper Lip is removed:—*magnified.*

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Pub.d by S. Curtis Glanemwood Essex Oct.r 1 1835

WESTRINGIA EREMICOLA. DESERT WESTRINGIA.

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Class and Order.

DIDYNAMIA GYMNOSPERMIA.

(Nat. Ord.—LABIATÆ.)

Generic Character.

Cal. æqualis, 5-dentatus. *Cor.* tubo brevi, fauce ampliata, limbo subbilabiato, labio superiore bifido, inferiore trifido, lobo medio subbifido. *Stam.* 4, erecta, distantia; superiora fertilia, antheris dimidiatis unilocularibus glabris; inferiora sterilia, antheris bipartitis, lobis linearibus dependentibus cassis.—Frutices. Folia *perennantia, ternatim vel quaternatim verticillata, integerrima. Benth.*

Specific Character and Synonyms.

WESTRINGIA *eremicola;* foliis ternis linearibus margine revolutis subtus cinereis, calycibus sericeo-pubescentibus, dentibus tubo sublongioribus. *Benth. Gen. et Spec. Labiat. p.* 459.
WESTRINGIA eremicola. *Allan Cunningham, MSS.*
WESTRINGIA longifolia. *Lindl. in Bot. Reg. t.* 1481. *non Br.*

A native of the internal parts of New South Wales, and as far as our researches have extended in that vast country, the only species known to be indigenous to the Interior—the localities of its several congeners being confined to the coast-line, or its vicinity, where they either occupy exposed spots on the boundary sandhills of a weather-beaten shore, or stations in the stony back-grounds equally within the influence of the sea air. The present subject was originally discovered by the botanists attached to the expedition of Mr. OXLEY on the Lachlan River, in 1817, who met with it scattered over a considerable extent of level, barren country, bounding that stream on the South-west. It approaches nearest

nearest to G. *longifolia*, (Prodr. Fl. Nov. Holl.) under which name it has been figured in the Botanical Register; but it differs essentially from Mr. Brown's plant, in its leaves, which are shorter, having a white tomentum on the under side; its flowers being moreover, altogether smaller, and the tube of the calyx somewhat shorter than the teeth. From seeds gathered in 1822, in the neighbourhood of Bathurst, where the plant was again detected, it was raised at Kew, from which garden it was distributed to other collections, and by the liberality of Mr. Aiton, specimens in flower were sent us in October last.

During the winter season, it requires but the protection of a frame or pit; at other periods of the year, it thrives well in the open air, and produces a succession of flowers between the months of spring and autumn. The usual mode of propagation is by cuttings, for it hardly ripens its seeds in cultivation.

Descr. An erect *shrub*, rising usually to the height of two or three feet, with many slender, cinereous, divaricate, rather copiously-leaved *branches*, for the most part of opposite insertion. *Leaves* verticillate, ternate, patent, about half an inch in length, somewhat subulate, linear, acute, mucronate, margins very revolute, dark-green, scabrous, interspersed with minute white hairs above, and clothed with a whitish pubescence on the underside. *Flowers* solitary, axillary, short-pedicelled, rather crowded at the extremities of the branches. *Calyx* subcampanulate, obtusely-angled, pubescent, with two linear bracteas at the base, extending beyond the lower half of the tube, five-cleft, teeth lanceolate, acuminate, slightly subulate, equal to, or even longer than the tube. *Corolla* pale-blue, *tube* densely clothed with spreading, white hairs; *upper lip* obtuse, bifid, margins bent back, pubescent, without spots; *lower lip* deeply tripartite, for the most part smooth, with a few ochre-coloured spots at the base, lateral segments retuse, emarginate, shorter than the intermediate one, which is dilated at the apex and bifid. *Stamens* four; upper two fertile, lower two, imperfect. *Filaments* studded with numerous minute glandulous hairs, apex gibbous, and evidently jointed. *Fertile Anthers* one-celled, margins of the valves blue. *Pollen* white. *Sterile Anthers* white, bipartite, lobes linear, arcuate, dependent. *Style* filiform, exserted, the length of the filaments. *Stigma* bifid. *Germen* 4-lobed.

Fig. 1. Calyx and Bracteas. 2. Corolla and Stamens. 3. Fruit invested by the Calyx.

RHODODENDRON CALENDULACEUM, *var.* fulgidum.
FLAME-COLOURED RHODODENDRON; orange-red *var.*

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Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—ERICEÆ.)

Generic Character.

Cal. 5-partitus. *Cor.* infundibuliformis, 5-loba. *Stam.* 5—10, declinata: antheris apice biporosis. *Capsula* 5-locularis, 5-valvis, ab apice dehiscens, valvarum marginibus inflexis dissepimenta formantibus. *Receptaculum* centrale, 5-angulare. *Semina* membrana involuta.

Specific Character and Synonyms.

RHODODENDRON *calendulaceum;* foliis oblongo-ovalibus adultis hirsutis, corollæ tubo laciniis breviore piloso subviscido, calyce villoso.
AZALEA calendulacea. *Mich. Am. v.* 1. *p.* 151.
Var. croceum. *Sims, Bot. Mag. t.* 1721.
Var. fulgida. *Tab. nostr. t.* 3439.

This very beautiful plant was received by the Glasgow Botanic Garden from Mr. MALCOLM as the var. *fulgida* of *Azalea* (now RHODODENDRON) *calendulacea*. It is, we believe, a hybrid variety, and if we may judge from the appearance, between R. *Ponticum* and R. *nudiflorum,* var. *coccineum;* but of the parentage we will not undertake to speak: suffice it to say, that it recommends itself no less by the fine colour of its inflorescence, than by the bright green of its leaves, which spreading out beneath the corymbs of flowers, form a rich back ground to them. Cultivated in pots forced in the conservatory in the spring months, there are few plants better calculated to enliven a collection than the present. It comes near the "Copper-coloured High-clere Azalea" of Bot. Reg. t. 1366, but is infinitely superior in point of richness of colour.

Pub by S. Curtis Glazenwood Essex. Oct.r 1 1833.

GILIA ACHILLEÆFOLIA. MILFOIL-LEAVED GILIA.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—POLEMONIACEÆ.)

Generic Character.

Cal. campanulatus, 5-fidus, margine et sinubus membranaceis. *Cor.* infundibuliformis vel subcampanulata, limbo 5-partito, laciniis obovatis integris. *Stam.* ad faucem v. vix intra tubum inserta. *Antheræ* ovato-subrotundæ. *Capsulæ* loculi polyspermi. *Benth.*

Specific Character and Synonyms.

GILIA *achilleæfolia;* caule erecto glabriusculo, foliis bi-tripinnatisectis segmentis lineari-subulatis, corymbis capitatis multifloris longissime pedunculatis, calycibus sublanatis, corollis calyce duplo longioribus, staminibus corolla brevioribus. *Benth.*

GILIA achilleæfolia. *Benth. in Bot. Reg. fol.* 1622. *Lindl. Bot. Reg. t.* 1682.

A very pretty hardy annual, discovered by Mr. DAVID DOUGLAS, in North California, and sent to the Horticultural Society, by whom it has been distributed to various gardens. It blossoms during the summer months, and resembles, as Professor LINDLEY remarks, the GILIA *capitata* (Bot. Mag. t. 2698); but its flowers are much larger and of a more purple colour, and the stamens are not exserted.

DESCR. An upright, nearly glabrous, much branching plant, a foot or more high. *Leaves* alternate, deeply pinnatifid, sometimes bipinnatifid, the segments opposite, all linear, acute, the ultimate ones solitary on one side. *Peduncles* axillary and terminal, slender, bearing a corymb of

from

from eight or ten or even more *flowers*. *Calyx* downy, of five deep segments, united, for nearly their whole length, by an intermediate membrane. *Corolla* almost campanulate, with the limb spreading, of five rather acute, ovate lobes. *Style* exserted: *Stigma* trifid.

Fig. 1. Calyx, including the Pistil:—*magnified*.

Pub. by S. Curtis, Glazenwood, Essex. Oct.r 1. 1835

Swan &c.

PHLOX DRUMMONDII. MR. DRUMMOND'S PHLOX.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—POLEMONIACEÆ.)

Generic Character.

Cal. prismaticus 5-fidus. *Cor.* tubo elongato, limbo hypocrateriformi 5-lobo. *Stam.* inæqualia tubo inserta. *Caps.* 3-locularis, 3-valvis, subtrisperma.

Specific Name and Character.

PHLOX * *Drummondii;* annua, patenti-pilosa erecta, foliis oblongis acutis aristatis, basi subcordatis semiamplexicaulibus infimis subspathulatis, floribus corymbosis, corollæ laciniis subulatis acuminatissimis reflexis corollæque tubo (calycis tubum ter excedente) hirsutissimis.

Among the many interesting plants which attracted Mr. DRUMMOND'S attention during his journeyings in Texas, was the present very handsome species of PHLOX. The seeds sent over, in the early part of the year 1835, soon vegetated, the plants blossomed most copiously, and with equal profusion and brilliancy of colour, whether in the greenhouse or in the open border; and it bids fair to be a great ornament to the gardens of our country. Hence, and as it is an undescribed species, I am desirous that it should bear the name and serve as a *frequent* memento of its unfortunate discoverer, who shortly after quitting Texas, fell a

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* From φλοξ, *flame,* on account of the brilliancy of the blossoms in some species.

a victim to the climate of Cuba, in the prime of life, and just as he was on the point of exploring the botanical riches of that portion of the United States, which, next to Texas, held out the best prospect of rewarding his indefatigable exertions, namely, Florida. He has, indeed, accomplished enough, by his zeal and researches, to secure to himself a lasting name throughout the botanical world: yet it is impossible not deeply to regret the loss, both as concerns our favourite science and his friends. He had made arrangements for a grant of land in the interior of Texas, so that his prospects for the maintenance of his family were brighter than ever; and he could not have failed, by the proximity of his intended residence to the hitherto unexplored mountains of North Mexico, to render yet greater service to that science to which he was so ardently devoted, and in the pursuit of which, he has thus fallen a sacrifice.

Descr. Phlox *Drummondii* has a small and decidedly annual *root*. *Stem* a foot or more high, simple or branched, clothed with long, patent hairs. *Leaves*, below opposite, and oblongo-spathulate, above alternate and oblong, acute and aristate, somewhat cordate at the base, sometimes even auriculated, and semiamplexicaul, ciliated at the margin and slightly hairy, but chiefly so beneath: all of them of a pale green colour. *Corymbs* terminal, of several large very showy *flowers*. *Pedicels* short, and as well as the *calyx* and subulate *bracteas*, clothed with long, patent hairs, some of which are tipped with glands. *Calyx* of five, long subulate segments, but united by a *pellucid* membrane for one half of their length into a *tube*; the *limb* reflexed. *Corolla* hypocrateriform, with the tube about thrice as long as the tube of the calyx, and very hairy, with the hairs patent: the *limb* of five spreading, obovate, approaching to rhomboidal *lobes*, pale purple without, within, or on the upper side, of a brilliant rose-red or purple, varying exceedingly on different individuals in intensity, and in their more or less red or purple tinge: the eye generally of an exceedingly deep crimson. *Stamens* completely within the tube, but at different heights: the *filaments*, for almost their whole length, combined with the corolla. *Germen* ovate: *Style* short: *Stigmas* three, as long as the style. *Capsule* ovato-globose, beautifully dotted, tipped with the persistent style, and included within the persistent calyx.

MESPILUS LOBATA. CUT-LEAVED MEDLAR.

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Class and Order.

ICOSANDRIA PENTAGYNIA.

(Nat. Ord.—ROSACEÆ.)

Generic Character.

Cal. 5-fidus, laciniis foliaceis. *Pet.* suborbiculata. *Discus* magnus mellifluus. *Styli* 2—5, glabri. *Pomum* turbinatum apertum 5-loculare, endocarpio osseo. *D C.*

Specific Character and Synonyms.

MESPILUS* *lobata;* inermis, foliis obovato-ellipticis acutis serratis apice lobatis supra glabris nitidis subtus pubescentibus, stipulis deciduis semicordatis, hinc auriculatis incisis, floribus 1—5 corymbosis digynis.
MESPILUS lobata. *Poir. Encycl. Bot. Suppl. v. 4. p. 71.*
MESPILUS Smithii. *De Cand. Prodr. v. 2. p. 633.*
MESPILUS grandiflora. *Smith, Ex. Bot. v. 1. p. 33. t. 18. Spreng. Syst. Veget. v. 2. p. 505.*

This interesting species of *Medlar,* handsome in its foliage, as well as in its blossoms, (which latter too yield a fragrance similar to that of the *Hawthorn,*) seems to have been long cultivated in our gardens and shrubberies, though we are wholly unacquainted with its native country. Sir JAMES SMITH first described it in the Exotic Botany, and named it M. *grandiflora,* an appellation which it scarcely merits: for the flowers are not larger than that of the only other true MESPILUS, namely, M. *Germanica,* neither are they so small as to be "only half the size," of the latter, as stated by DE CANDOLLE, who changed the name to M. *Smithii,* without being aware that it was the M. *lobata* of POIRET, who described it from plants growing in the French nurseries.

DESCR.

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* Μεσπιλη, the Greek name for the *Medlar.*

Descr. A small *tree*, similar in its mode of growth to the common *Medlar*, with long, somewhat pendent branches and copious foliage, in which the pure white blossoms are, as it were, nestled. *Leaves* obovato-elliptical, on short petioles, the margins finely serrated, towards the extremity, on each side, distinctly lobed, acute, the upper surface glabrous and shining, the under paler, and slightly downy. *Stipules* semicordate, or cut and glanduloso-serrate, generally with a lobe or auricle on one side at the base: but they are only seen at the base of the young leaves. *Flowers* large, white, fragrant, rarely solitary, generally two to five from the extremity of the numerous short branches, corymbose. *Germen* top-shaped, downy. *Calyx* lanceolate, acuminate, with glandular serratures, soon reflexed. *Petals* nearly orbicular, waved at the margin. *Stamens* numerous: *Anthers* purplish-brown. *Styles* two, rarely three: *Stigmas* capitate.

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PULTENÆA CORDATA. SHARP HEART-LEAVED PULTENÆA.

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Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Cal. 5-fidus, labiis proportionatis, bibracteatus (bracteis sæpius ipso tubo insidentibus). *Cor.* papilionacea. *Germ.* sessile, dispermum. *Stylus* subulatus, adscendens. *Stigma* simplex. *Strophiola* seminis lobis posticis incisis. *D C.*

Specific Name and Character.

PULTENÆA *cordata;* capitulis terminalibus, foliis cordato-ovatis acutis mucrone pungenti subcarnosis concavis utrinque glabris, stipulis scariosis.

This plant was raised at the Botanic Garden, Edinburgh, in 1832, from seeds sent from Van Diemen's Land the year before, by CAMPBELL RIDDELL, Esq. It flowered very freely in the greenhouse in April, 1835, and is highly ornamental, notwithstanding the lurid colour of its foliage and branches.

DESCR. *Shrub* erect; *branches* erect, red, villous, when very young green. *Leaves* crowded, petiolate, spreading, cordato-ovate, acute, terminated by a pungent bristle; veinless, somewhat fleshy, concave, glabrous on both sides, shining below, of a very dark green. *Petioles* red, fleshy, adpressed, tumid at the base. *Stipules* erect, acute, adpressed, nearly twice as long as the petioles, within which they cohere, membranous. *Bracteæ* two, at the base of the calyx, ovato-lanceolate, keeled, adpressed, free, as long as the calyx-tube. *Calyx* red, villous, teeth of the lower lip spreading and somewhat reflected, equal. *Flowers* capitate at the extremity of the branches, 2—5 in the capitula, perfumed,

perfumed, but not pleasantly; *standard* rotundato-kidney-shaped, slightly notched, orange-coloured, with a few red streaks and spots near the claw; *alæ* spathulato-oblong, of the same colour and nearly as long as the standard, in contact by their upper edges, *tooth* short, *claw* linear, nearly half the length of the plate; *keel* red-orange-coloured at the apex, monopetalous, the linear claws only being free, apex notched, teeth short and blunt, papilla on each side distinct. *Stamens* included. *Anthers* elliptico-rotund, orange-coloured. *Pistil* equal to the longest stamens. *Germen* silky. *Graham.*

Fig. 1. Calyx and Bracteas. 2. Standard. 3. Alæ. 4. Keel. 5. Pistil: —*magnified.*

Ellis M. Nab. del.

Pub. by S. Curtis, Glazenwood

BEGONIA HERACLEIFOLIA. COW-PARSNEP-LEAVED BEGONIA.

Class and Order.

MONŒCIA POLYANDRIA.

(Nat. Ord.—BEGONIACEÆ.)

Generic Character.

MASC. *Cal.* o. *Cor.* polypetala. *Pet.* plerumque 4, inæqualia. FŒM. *Cal.* o. *Cor.* petalis 4—9, plerumque inæqualibus. *Styli* 3, bifidi. *Capsula* triquetra, alata, trilocularis, polysperma.

Specific Character and Synonyms.

BEGONIA *heracleifolia ;* acaulis, foliis subæqualibus cordatis pilosis profunde palmatis, lobis 7 lanceolatis acutis incisis serratisque, petiolis scapisque elongatis patenti-hispidis, corollis dipetalis, fructu trialato, alis rotundatis obtusis, altera maxima.

BEGONIA heracleifolia. *Schlecht. et Cham. in Linnæa, v.* 5. *p.* 603. *Lindl. Bot. Reg. t.* 1668.

BEGONIA heracleifolia. *Grah. in N. Phil. Journ. July,* 1833.

Our plate represents a small flowering specimen, with male flowers only, of this fine and handsome plant from a drawing kindly made by Mr. MACNAB at the Edinburgh Botanic Garden, to which we have added a panicle with both male and female flowers, and nearly perfect fruit, from a noble plant in the stove of the Glasgow Botanic Garden, where it flowers in the greatest perfection, in April and May. The species is a native of Mexico, having been detected by Messrs. SCHIEDE and DEPPE in Xalapa, and first described by the learned authors above quoted in the Linnæa. Through Mr. OTTO of Berlin, it has been introduced to our collections.

Descr. "*Leaves* (seven inches across) bright green above, paler below, all radical, subpeltate, cordato-palmate, hairy above and below, with seven strong radiating nerves, very prominent below, lobes lanceolate, oblong, undulate, sinuate, unequal, the central (four inches from the insertion of the petiole to its apex) being the largest, the others gradually smaller to the sinus; *petiole* rather shorter than the middle lobe, densely covered with long, coarse, entangled crystalline hairs, which, in fading resemble yellow wool. *Scape* (two feet high) tapering upwards, straight, pretty closely covered with oblong, red streaks, from which spring long, tortuous, acute, crystalline hairs. *Bracteas* in opposite pairs, at each division of the flower-stalks, serrated, ovate, hairy, dentato-ciliate, nerved, smaller in every succeeding pair. *Peduncles* dichotomo-deliquescent, streaked like the scape, and somewhat hispid. *Flowers* rose-coloured, dipetalous, petals round, entire: *male flowers* in the cleft of the peduncles, expanding before the female. *Stamens* yellow, ascending: *filaments* cohering only at their base; *anthers* spathulate; connective extending beyond the loculaments." *Graham*. *Capsule* triquetrous, with three obtuse, membranous, brownish wings, of which, two are comparatively short, the third much larger, and pointing upwards.

Fig. 1. Stamens. 2. Capsule nearly ripe :—*magnified.*

Pub. by S. C[illegible] 1 1835

Primula Sibirica ; β. integerrima. Siberian Primrose ; entire-leaved *var*.

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Class and Order.

Pentandria Monogynia.

(Nat. Ord.—Primulaceæ.)

Generic Character.

Cal. tubulosus, quinquefidus seu quinquedentatus, persistens. *Corolla* tubulosa fauce v. nuda v. glandulosa, limbo 5-lobo. *Capsula* apice 10-dentata polysperma.—Flores *subumbellati involucrati.*

Specific Character and Synonyms.

Primula *Sibirica;* glaberrima, foliis oblongis quibusdam subrotundis membranaceis subrugosis integerrimis v. crenatis longè petiolatis, scapo erecto stricto gracili, umbellâ pauciflorâ, involucro subtriphyllo, foliolis calcaratis vaginantibus pedunculis laxis, demum strictis et inæqualiter elongatis.

(α.) foliis crenatis.

Primula Sibirica. *Jacq. Misc. Austr.* 1. 161. *Willd. Spec. Plant.* 1. 806. *Roem. et Schult. Syst. Veg.* 4. 143. *Pers.* 1. 170. *Spreng. Syst. Veg.* 1. 576. *Ledebour, Fl. Altaic.* 1. 213. *Hook. Bot. Mag. t.* 3167.

Primula rotundifolia. *Pall. It.* 3.223.

Primula intermedia. *Ledebour, Mem. de l'Acad. des Sciences de St. Peters. v.* 519. (*var.* minor.)

Primula foliis ovatis, glabris, integerrimis; umbellis pauciforis nutantibus. *Gmel. Fl. Sib.* 4. 83. *t.* 46. *f.* 1.

(β.) foliis integerrimis. *Tab. nostr.* 3445.

This variety, as well as that figured at t. 3167, is a native of marshes among the Altai Mountains about the middle of the range, and was received at the Botanic Garden, Edinburgh,

Edinburgh, in 1832, from Mr. Goldie of Ayr, where several specimens flowered in the cold frame and greenhouse in March and April, 1835.

Descr. Whole plant perfectly glabrous. *Leaves* all radical, oblong, or some of the smaller ones subrotund, membranaceous, flaccid, flat, or concave at the base, of a light, lively green, entire in the margin, or obscurely toothed, veined and slightly rugose; *middle rib* very strong, and forming a prominent keel behind; *petioles* longer than the leaves and slender. *Scape* (in our cultivated plants eight inches to a foot high, in native specimens, according to Ledebour, from three inches to nearly a foot) erect, straight, slender, shining. *Involucrum* generally of three or four leaflets, but varying with the number of pedunCles in the umbel, erect, adpressed, herbaceous, blunt or somewhat pointed, having at the base a colourless slightly spreading spur. *Peduncles* generally three or four, slender, at first lax and somewhat nodding, afterwards straight, erect, parallel, and very unequally elongated (from half an inch to two inches). *Calyx* oblong, with five connivent, short, nearly blunt teeth, herbaceous, furrowed between the lobes, in appearance very nearly resembling the involucre, but herbaceous and gibbous, not toothed at the base. *Corolla*, tube nearly twice as long as the calyx, yellowish, slightly angled, dilated at the apex; *limb* (eight lines across) oblique, five-parted; *segments* obcordate, two thirds of the length of the tube, reddish lilac, paler behind; throat yellow. *Stamens* sessile in the dilated apex of the tube, oblong, yellow. *Germen ovate*, glabrous, green. *Style* straight, (shorter than the tube of the corolla in the specimen examined,) reddish. *Stigma* globular, light-green. *Graham.*

Pub.by S. Curtis Glazenwood Essex Nov.r 1 1835

VACCINIUM CANADENSE. CANADIAN WHORTLE-BERRY.

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Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—VACCINIEÆ.)

Generic Character.

Cal. 4-dentatus. *Cor.* urceolata s. campanulata, limbo 4-fido, reflexo. *Antheræ* bicornes. *Bacca* 4—5-locularis. *Spr.*

Specific Character and Synonyms.

VACCINIUM *Canadense;* ramis floriferis foliosis, racemis subcorymbosis secundis nutantibus bracteatis, corollis campanulatis, calycibus ferè erectis, foliis lanceolatis integerrimis membranaceis deciduis supra (ad nervos) pubescentibus subtus hirsutis, germinis disco elevato medio depresso, stigmate incluso.

VACCINIUM Canadense. *Herb. Banks. Rich. in Frankl. 1st Journ. ed. 2. App. p.* 12. *Hook. Fl. Bor. Am. v. 2. p.* 32.

This plant had often been received by Mr. MURRAY from Canada, and was long cultivated in the Botanic Garden of Glasgow, without a name, until we raised plants sent home by Mr. DRUMMOND, from Capt. Sir JOHN FRANKLIN'S second expedition; when, upon comparing flowering specimens with my original ones of V. *Canadense,* gathered and named by Dr. RICHARDSON on the first of those important journies, I clearly ascertained that they were the same species, which nevertheless does not appear yet to have been taken up by any American Botanist. It flowers in May, and may be readily known from V. *corymbosum* by its dwarf size, leafy flowering branches, and campanulate corolla, from V. *Pennsylvanicum*

sylvanicum by its large, quite entire leaves, and wider mouth to the corolla, and from both by the very hairy leaves. It seems to have been first discovered by KALM, whose specimen, under the name adopted by Dr. RICHARDSON, is preserved in the Banksian Herbarium.

DESCR. *Stem* much branched, from six to eight or ten inches high, the branches clothed with a dingy-coloured, downy bark. *Leaves* often an inch long, lanceolate, acute at both extremities, quite entire at the margin, membranaceous, deciduous, soft and flaccid, the veins above downy, the whole underside clothed, but especially on the midrib and veins, with copious spreading hairs. *Racemes* short, four to six-flowered, subcorymbose. *Calyx* nearly erect, green. *Corolla* short and campanulate, white tinged with red, the mouth open, five-toothed, the teeth reflexed. *Stamens* shorter than the style: and the *style* itself is included within the corolla. *Berries* blue-black, agreeable to the taste.

Fig. 1. Flower. 2. Calyx. 3, 4. Stamens. 5. Underside of a Leaf.

VACCINIUM MYRTILLOIDES. FLASK-FLOWERED WHORTLE-BERRY.

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Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—VACCINEÆ.)

Generic Character.

Cal. 4-dentatus. *Cor.* urceolata s. campanulata, limbo 4-fido reflexo. *Antheræ* bicornes. *Bacca* 4—5-locularis. *Spr.*

Specific Character and Synonyms.

VACCINIUM *myrtilloides ;* foliis ovalibus ovatisque utrinque acutis serratis membranaceis glabris, pedunculis solitariis unifloris, corollis lato-ampullaceis depressis, ramulis angulatis.

VACCINIUM myrtilloides. *Mich. Am. v.* 1. *p.* 234. *Pursh, Fl. Am. v.* 1. *p.* 288. *Hook. Fl. Bor. Am. v.* 2. *p.* 32.

VACCINIUM angustifolium. *Ait. Hort. Kew. ed.* 1. *v.* 2. *p.* 11.

(β.) *macrophyllum ;* foliis majoribus.

(γ.) Myrtillus ; *var. Sm. in Rees Cycl.*

(γ.) membranaceum. *Dougl. MSS.*

A very singular and well-marked species of VACCINIUM, allied to our V. *Myrtillus,* and in a dry state, when the corollas are injured by pressure, it may be easily mistaken for a variety of that species, as was done by Sir J. E. SMITH ; but whoever sees recent flowering specimens, can never be at a loss to distinguish it : for the blossoms are so remarkably short and broad, that they almost exactly resemble the apophysis of SPLACHNUM *ampullaceum.* Introduced by Mr. DRUMMOND, the indefatigable and meritorious Assistant Naturalist, during Capt. Sir JOHN FRANKLIN's second expedition

dition into North America. He found it abundantly on high alpine woods of the Rocky Mountains, about lat. 52°. It was originally discovered by Michaux in "Canada and Hudson's Bay," and it was found by Mr. Menzies on the North-west coast, and by Mr. Douglas on the West side of the Rocky Mountains: so that like the V. *cæspitosum* already figured in our Magazine, its place of growth extends from the Atlantic to the Pacific.

Descr. In the Glasgow Botanic Garden, this plant forms a *shrub* about a foot high, with spreading *branches*, the younger ones of which are distinctly angular, pale brown. *Leaves* oval, sometimes oval-lanceolate, rarely ovate, acute at both extremities, membranous, deciduous, veiny, serrated, glabrous. *Peduncles* solitary, short, curved downwards, each bearing a solitary, pendent *flower*: of which the *corolla* is remarkable for its flagon-shaped appearance, being globoso-urceolate, but singularly depressed, pale yellowish-green, or dingy white tinged with red. *Stamens* ten. *Filaments* glabrous: *Anthers* with two rather short awns. The *fruit* is large, globose, blackish-purple, apparently destitute of bloom, and according to the observations both of Mr. Drummond and Mr. Douglas, highly esteemed by the natives.

Fig. 1. Flower. 2. Pistil and Calyx. 3. Stamens: *magnified.*

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EPIMEDIUM DIPHYLLUM. TWIN-LEAVED EPIMEDIUM.

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Class and Order.

TETRANDRIA MONOGYNIA.

(Nat. Ord.—BERBERIDEÆ.)

Generic Character.

Sepala 6—8, extus sensim minora. *Petala* 4—6, intus appendice discolora aucta. *Capsula* siliculiformis, polysperma. *Semina* obliqua transversim inserta.—Herbæ *radicibus perennibus, foliis petiolatis multisectis. D C.*

Specific Character and Synonym.

EPIMEDIUM *diphyllum;* petiolis filiformibus dichotomis racemum unilateralem gerentibus, geniculis tumidis pilosis, foliolo solitario in utroque ramo, petalis planis.
EPIMEDIUM diphyllum. *Lodd. Bot. Cab.* 1858.

The petals (nectaries, LINN.) of this rare plant possess a form extremely unlike that which occurs in EPIMEDIUM *alpinum,* but the variation is precisely similar to that which exists occasionally in AQUILEGIA, and cannot form a generic distinction, where the whole habit of the plant, and the structure of every part of fructification, except the corolla, is precisely as in the common species. I have taken a different view of the petiole, and the origin of the flowers, from that which is commonly received, but it seems to me simplest, and that which best explains the appearances. This species is a native of Japan. We received a plant at Edinburgh from Berlin in 1834. It flowered pretty freely in the greenhouse of the Botanic Garden early in spring. I do not find the hairiness of the petiole, excepting at the joints, nearly so great as is represented in the Botanical Cabinet.

DESCR.

Descr. *Petioles* all radical, numerous, filiform, dichotomous, sparingly covered with spreading hairs, which are more abundant at the swollen joints, each branch supporting one leaflet, one of the branches occasionally trifid, and supporting three leaflets. *Leaflet* (length an inch and a half, breadth nine lines) about as long as the branch of the petiole, obliquely cordate, above of a lively green and glabrous, below glaucous and pubescent, about nine-nerved, reticulate, distantly provided with bristle-shaped teeth. Many of the petioles barren, others having towards the top a swollen joint, from which a raceme springs. The portion of the petiole above this joint is equal in length to the branches of the barren petioles, and its subdivisons half of that length. *Peduncle* longer than the leaf and the portion of the petiole above its origin, without flowers for about half its length (rarely one or two in its axil) above this having about four straight, slender, glabrous, secund *pedicels* (about half an inch long) green and slightly swollen under the flower, the lower ones arising in the axils of small *bracteas,* which are wanting in the upper. *Flowers* expanding irregularly along the *rachis,* white, cernuous, with four unequal, caducous, slightly coloured, and dotted bracteolæ at the base. *Sepals* four, lanceolato-oblong, spreading. *Petals* four, obovate, rather longer than the sepals, flat. *Stamens* four, about half as long as the sepals; *anthers* nearly sessile, oblong, yellow, opening by a valve rolling upwards on each side; *connective* green; *pollen granules* minute, oblong, yellow. *Pistil* green, longer than the stamens; *stigma* blunt, terminal; *style* filiform; *germen* oblong, gibbous on the lower side, unilocular; *ovules* several, obovate, attached to the dorsal suture. *Graham.*

Fig. 1. Flower. 2. Calyx and Petal. 3. Stamens and Pistil. 4, 5. Stamens. 6. Pistil:—*magnified.*

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Dyckia rariflora. Few-flowered Dyckia.

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Class and Order.

Hexandria Monogynia.

(Nat. Ord.—Bromeliaceæ.)

Generic Character.

Cal. triphyllo-tripartitus; laciniæ (v. foliola) subæquales, erectæ, (nunquam spirales,) ellipticæ, concavæ. *Cor.* urceolato-subcampanulata; *petala* erecta (nec spiraliter sibi incumbentia), crassiuscula, obovato-rhomboidea, basi nuda. *Filam.* lanceolata, acuminata, ad $\frac{1}{3}$—$\frac{2}{3}$ in cylindrum basi petalorum adnatum connata. *Antheræ* erectæ, ovato-lanceolatæ, basi sagittato-emarginatâ affixæ. *Germen* pyramidali-oblongum, trilobum, tripartibile, triloculare, trivalve; loculis polyspermis, apice vacuis, valvulis concavis, coriaceis, marginibus introflexis dissepimenta formantibus; *ovulis* angulo interno loculorum biseriatim affixis. *Styl.* brevissimus v. subnullus (?) tripartibilis. *Stigmata* 3, patentia, apice bifida. *Schult. fil. in Martius Fl. Brasil. ined.*

Specific Character and Synonym.

Dyckia* *rariflora;* foliis lineari-subulatis recurvo-patentibus, spicâ rariflorâ, bracteis membranaceis adpressis, calyce acutiusculo dimidio brevioribus.
Dyckia rariflora. *Schultes fil. in Syst. Veget.* 7. 1195.

We received this plant, which is a native of Brazil, from the liberal conductors of the Botanic Garden, Berlin, in 1832.

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* So named in honor of the Prince de Salm Dyck, distinguished for his knowledge of Succulent Plants, and his noble Collection of them in a living state.

1832. It is very handsome, and flowered, for the first time, in the stove of the Botanic Garden, Edinburgh, in June, 1835.

Descr. *Stem* short, stout. *Leaves* (seven inches long, four to six lines broad at the base) crowded, subulate, spreading, deflexed in the upper half, rigid; above, when young, channelled, afterwards flat, of an uniform dark-green colour, shining; below rounded, glaucous, striated; *teeth* aristato-spinous, distant, spreading, straight or hooked backwards or forwards, dark brown. *Flower-stalk* (two feet high) elongated, erect, somewhat woolly at the top, scaly, the scales woolly, adpressed, and clasping, below resembling reduced, suberect leaves, above less acuminated: membranous, and marcescent. *Flowers* (about twelve) scattered loosely near the top of the stalk, without pedicels, arising in the axils of the scales, spreading, orange-coloured. *Calyx* three-parted, segments rigid, concave, ovate, overlapping at the base, adpressed, twice as long as the scales. *Corolla* twice as long as the calyx, trifid, triquetrous when fully expanded, nectariferous at the base; segments slightly unequal in breadth, rhomboid, elongated at the base, spreading along the centre, compressed on the sides, somewhat undulate, united at the base with the calyx into a fleshy mass. *Stamens* six, inserted into the corolla, but alternately in the centre of the segments, and towards the edge so as to be opposite to the sepals, subexserted; *filaments* broad, flattened, slightly tapering at the apex; *anthers* bilocular, sagittato-oblong, bursting along the front, attached at the bottom of the sinus to the filament, and placed on the face of a broad connective; *pollen granules* minute, yellow, oblong. *Pistils* shorter than the stamens; *style* trifid, segments twisted together, and towards the apex each on its own axis, so as to give the linear *stigma* a spiral form. *Germen* oblong, three-lobed, lobes cohering in the centre; *ovules* numerous, rounded, flattened from being crowded above each other, attached in two rows within each locament to a central receptacle. *Graham.*

Fig. 1. Stamens. 2. Pistil: *magnified.*

W. J. H. del.

Pub by S Curtis, Glazenwood Kiver Sept 1 1836.

Isopogon spathulatus; *var.* linearis. Spathulate-leaved Isopogon; linear-leaved *var.*

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Class and Order.

Tetrandria Monogynia.

(Nat. Ord.—Proteaceæ.)

Generic Character.

Perianthium quadrifidum, tubo gracili diutiùs persistente. *Squamæ* nullæ hypogynæ. *Stylus* totus deciduus. *Stigma* fusiforme v. cylindraceum. *Nux* sessilis, ventricosa, undique comosa.—Frutices *rigidæ*. Folia *glabra, plana v. filiformia, divisa v. integerrima.* Capitula *terminalia, rarò axillaria.* Flores *modo densissimè imbricati, strobilo globoso; modo fastigiati, receptaculo communi planiusculo subinvolucrato, paleis deciduis, congestis. Br.*

Specific Character and Synonyms.

Isopogon *spathulatus;* foliis cuneato-obovatis lineari-spathulatisve, apiculo acuto, caule prolifero, capitulis solitariis obvallatis. *Br.*

Isopogon spathulatus. *Br. Prodr. Fl. Nov. Holl. Suppl. Prim. p.* 8.

(α.) *obovatus;* folia obovata plana. *Br. loc. cit.*

(β.) *linearis;* folia lineari-spathulata. *Br. loc. cit. Tab. nostr.* 3450.

A native of King George's Sound, where, it appears, the two varieties enumerated by Mr. Brown were discovered by Mr. Baxter in 1829, and by whom the present one was introduced to the gardens near London in the following year. It is a plant of strong growth, flowering with freedom in the spring of the year, and, although not so conspicuous among other plants of the greenhouse, as its congener I. *Loudoni* of Mr. Brown, of which we lately published a figure in this work, (tab. 3421,) it nevertheless will

will doubtless be regarded, when more generally known, as deserving a place in every choice Collection—the disposition it manifests to push forth its heads of blossoms at the extreme points of the lateral branchlets, which the plant throws out rather abundantly, and by which it is readily propagated, rendering this narrow-leaved variety of our species, well worth the cultivator's care.

Descr. A smooth *shrub* of rather irregular growth; in cultivation, seldom above two feet in height, much branched, and inclined to a bushy habit. *Branches* elongated, spreading, often horizontal and slightly deflexed, proliferous, more or less disposed in whorls, clothed with a brown bark; the branchlets covered with cinereous hairs. *Leaves* numerous, much crowded, especially at the extremities of the branchlets, linear-spathulate, thick, coriaceous, veinless, dark-green, slightly convex on the upper side, and terminated in a short, horny, red mucro, the adult ones being about an inch in length, smooth, and lævigated. *Flowers* pale-purple, crowded together at the extremities of the branchlets, and forming solitary, sessile heads, encircled by short leaves. *Bractes* lanceolate, acuminate, reticulately-veined, and densely ciliated with long white hairs. *Perianth* slender, smooth, divided into four linear subspathulate laciniæ, equal in length to the tube, the points of the laminæ being dark-purple, concave above, ciliated, tipped with long, white, silky hairs, and in the concavities the anthers are immersed. *Anthers* four, linear, bilocular, yellow, each furnished at the apex with a small capitated point. *Style* filiform, smooth, the length of the perianth. *Stigma* fusiform, studded with small, transparent, short points, obtusely apiculated.

W. J. H. del.ª

Pub. by S. Curtis Glazenwood Essex Dec.r 1 1835

Brassia caudata. Long-tailed Brassia.

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Class and Order.

Gynandria Monandria.

(Nat. Ord.—Orchideæ.)

Generic Character.

Perianthium explanatum. *Sepala* et *petala* angusta, libera, æqualia; his nunc minoribus. *Labellum* planum, indivisum, ecalcaratum, columna continuum, basi bicristatum. *Columna* libera, aptera, nana. *Anthera* 1-locularis. *Pollinia* 2, postice sulcata, caudicula brevi, glandula crassa. —Epiphytæ *pseudo-bulbosa.* Folia *pergamenea.* Scapi *radicales vaginati.* Flores *speciosi, spicati. Lindl.*

Specific Character and Synonyms.

Brassia* *caudata;* sepalis ovato-lanceolatis acuminatis, lateralibus longissimis, petalis acutis minoribus, labello acuminato. *Lindl.*

Brassia caudata. *Lind. Bot. Reg. t.* 832. *Hook. Ex. Fl. t.* 179. *Spreng. Syst. Veget. v.* 3. *p.* 729. *Lindl. Gen. et Sp. Orchid. p.* 212.
Malaxis caudata. *Willd. Sp. Pl. v.* 4. *p.* 83.
Epidendrum caudatum. *Linn. Sp. Pl. p.* 1349.
Helleborine ramosissima, caulibus et floribus maculosis. *Plum. Ic. t.* 277.

A most singular and beautiful plant, an inhabitant of Jamaica, and, probably, of other West Indian islands, first introduced to this country, we believe, by Mr. Lee of Hammersmith, and now pretty general in our collections of

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* In compliment to Mr. Brass, an assiduous collector of plants in South Africa, for the Royal Gardens at Kew.

of tropical *Orchideæ*, being a ready flowerer, and continuing long in blossom. Our figure was made at the Glasgow Botanic Garden, in September, 1834.

Descr. From the top of an oblong, compressed, dark-green *bulb*, sheathed at the base with three or four large brown *scales*, arise two oblong, coriaceous *leaves*. From the base of the same bulb, and subtended by a small leaf with a long, sheathing base, springs a *flower-stalk*, which, (including the spike,) measures eighteen inches long, and is drooping. *Flowers* eight to ten, large. *Sepals* lanceolate, acuminate, the two lateral ones with excessively long, slender tails; all of them, as well as the two *petals*, (much shorter, and smaller in size than the *sepals*,) of a pale, greenish-yellow colour, marked with dark-brown spots. *Lip* oblong, yellowish, with a narrow acumen, at the base marked with red-brown spots, and bearing two oblong glands. *Column* short, pale green. *Anther-case* hemisphærical, yellow.

Fig. 1. Lip of the Corolla. 2. Pollen-masses:—*magnified.*

Pub. by S. Curtis. Glasshouse Elem Dec.r 1. 1835.

PHACELIA CONGESTA. CLUSTER-FLOWERED PHACELIA.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—HYDROPHYLLEÆ.)

Generic Character.

Calyx quinquepartitus, persistens. *Corolla* subcampanulata, quinquefida, basi intus quinquesulcata. *Stamina* exserta. *Stylus* brevis, stigmatibus 2 elongatis. *Capsula* bivalvis, tetrasperma, valvula singula dissepimento dimidiato.

Specific Name and Character.

PHACELIA * *congesta;* pubescens, foliis inæqualiter pinnatis, pinnis pinnatifidis inciso-lobatis, racemis corymbosis multifloris.

Among the many interesting plants, collected by Mr. DRUMMOND in Texas, and sent home in his last despatches from that interesting country, the present beautiful species of PHACELIA was the first to display its pretty blossoms in the Glasgow Botanic Garden. They were in perfection in the greenhouse, in the month of June; and being an annual plant, there is no doubt but it will soon become a great ornament to our flower-borders. It was discovered at Galveston Bay. As a species, its nearest affinity is with P. *bipinnatifida* of MICH. Fl. Bor. Am. v. 1. p. 134. t. 16, a native of the Alleghanies, whence I have fine specimens from Dr. SHORT; but that is altogether a much larger plant, with less divided leaves, and a simple, or at most a forked raceme.

DESCR.

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* From φακελος, a *bundle*, on account of the crowded flowers.

Descr. *Root* annual. *Stem* rounded, downy, waved, and branched in our cultivated specimens, simple and upright in our native ones. *Leaves* stalked, pinnated, pinnæ alternate, extremely unequal, oblongo-ovate, some sessile, some on petioles, pinnatifid, lobed and cut, the ultimate ones almost bipinnatifid: all slightly downy. *Peduncles* lateral and terminal, bearing three to five rather dense, corymbose *racemes*, of bright purplish-blue *flowers*. *Calyx* lateral, compressed, of five deep, linear-lanceolate, erect segments. *Corolla* broadly campanulate, with a large, spreading, five-lobed *limb*: at the bottom of the tube within, are five pairs of oblong, oblique, white, membranous, convex scales, much resembling the involucres of some Asplenia, and between each pair a filament of a *stamen* is inserted. *Anther* small, yellow. *Germen* ovate, very hairy, two-celled, four-seeded: *seeds* attached to a central receptacle.

Fig. 1. Flower. 2. Calyx and Pistil. 3. Portion of the Tube of the Corolla, to show the Scales. 4. Pistil:—*magnified.*

Pub.by S Curtis Glasenwood Kent. Dec.r 1 1835.

Rubus Nutkanus. Nutka Bramble.

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Class and Order.

Icosandria Polygynia.

(Nat. Ord.—Rosaceæ.)

Generic Character.

Cal. fundo planiusculus 5-fidus nudus. *Pet.* 5 et *Stam.* numerosa calyci inserta. *Carpella* plurima in toro manifeste protuberante non carnoso capitata, stylo sublaterali superata, in drupellas carnosas conversa. *Semen* inversum. *D C.*

Specific Character and Synonyms.

Rubus *Nutkanus;* caule fruticoso erecto flexuoso stolonifero apice glanduloso-piloso basi nudiusculo, foliis 5-lobis inæqualiter dentatis, corymbis simplicibus, calycibus subinermibus cuspidatis, laciniis corollæ albæ æqualibus, stipulis connatis persistentibus. *Lindl.*

Rubus Nutkanus. *De Cand. Prodr. v.* 2. *p.* 566. *Lindl. Bot. Reg. t.* 1368. *Hook. Fl. Bor. Am. v.* 1. *p.* 183.

A large-flowered, handsome Rubus, nearly allied to the R. *odoratus,* or *Flowering Raspberry* of our gardens and shrubberies, of which the distinguishing characters are ably pointed out by Professor Lindley in the Register above quoted. It is a native of the western side of North America, having been discovered by A. Menzies, Esq. during the voyage of Captain Vancouver, at Queen Charlotte's Sound, lat. 51°, on the north-west coast of America; and has been since ascertained by the late Mr. Douglas to have a range along that shore, from 43° in North California to Nutka Sound, in lat. 52°, where Mocino gathered it. Mr. Douglas found it extending in the Interior to the head-springs of the Columbia River, while Mr. Drummond is the only

only person who has detected it on the eastern declivity of the Rocky Mountains, in lat. 52°. It is a hardy shrub with us, flowering in the summer months.

Descr. *Stems* erect, branched, woody, the branches glabrous, or sparingly setose, with glandular hairs. *Leaves* large, handsome, cordate, five-lobed, the lobes broad, acute, doubly serrated, the surface beautifully and copiously reticulated with veins. *Peduncles* terminal, corymbose, and, as well as the pedicels and calyx, glandular. *Calyx-leaves* ovate, concave, suddenly acuminated. *Petals* large, white, nearly orbicular, crumpled. *Stamens* numerous: *anthers* yellow. *Pistils* numerous.

Pub by S Curtis Glasenwood Essex Dec 1 1806

RHODODENDRON MAXIMUM; hybridum. LAUREL-LEAVED RHODODENDRON: hybrid *var.*

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Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—ERICINEÆ.)

Generic Character.

Calyx 5-partitus. *Corolla* infundibuliformis 5-lobus. *Stamina* 5—10, declinata: *antheris* apice biporosis. *Capsula* 5-locularis 5-valvis, ab apice dehiscens, valvarum marginibus inflexis dissepimenta formantibus: *Receptaculum* centrale 5-angulare. *Semina* membrana involuta.

Specific Name and Synonyms.

RHODODENDRON *maximum : hybridum.*
RHODODENDRON hybridum; bigener. *Lindl. Bot. Reg. t.* 195.
RHODODENDRON fragrans. *Hortulan.*

This charming plant has been for some time cultivated in the American border of the Glasgow Botanic Garden, under the name by which it was received of RHODODENDRON *fragrans*. It has every appearance of a hybrid, and has so many points in the form and colour and fragrance of the blossoms common with the R. *hybridum*, (*bigener*, of the Botanical Register,) that I have little hesitation in referring to that figure as a synonym. The chief differences are, that in the plant now alluded to, the flowers are smaller, and the leaves larger than in ours; which latter is indeed much the handsomer of the two. Assuming the two to have the same origin, then our hybrid is the offspring of the common white, glaucous-leaved AZALEA, which had been fertilized with the pollen of RHODODENDRON *maximum*. Whatever be its origin, it is amply worthy of a place in every flower-garden and shrubbery.

Pub by S Curtis Glazenwood Essex Dec 1 1835

Swan Sc

Bellis integrifolia. American Daisy.

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Class and Order.

Syngenesia Superflua.

(Nat. Ord.—Compositæ.)

Generic Character.

Involucrum hemisphæricum subuniseriale; squamis æqualibus. *Radius* uniserialis. *Pappus* o. *Achenium* compressum erostre. *Receptaculum* conicum nudum.

Specific Character and Synonyms.

Bellis *integrifolia;* annua puberula ramosa gracilis, foliis oblongis spathulatisve integerrimis, involucri foliolis linearibus acutissimis, acheniis pyriformibus pubescenti-hirsutis.

Bellis integrifolia. *Mich. Am. v.* 2. *p.* 131. *Pursh, Fl. Am. v.* 2. *p.* 527.

Eclipta integrifolia. *Spreng. Syst. Veget. v.* 3. *p.* 602.

Brachycome xanthocomoides. *Less. Comp. p.* 192? *Linnæa, v.* 9. *p.* 265?

This rare plant was long known only from the report of Michaux, as an inhabitant of shady hills and banks of rivers in Tenessee. Pursh had never seen it. Nuttall, when he wrote his useful *Genera of North American Plants*, was unacquainted with it, and observed, "No Botanist has yet collected this plant since Michaux. Is it not an Eclipta?"—And upon this latter suggestion, as it would appear, Sprengel transferred it to Eclipta: and a general opinion prevailed that no species of our favourite Daisy was to be found in the New World. But Mr. Nuttall had afterwards the good fortune to meet with it himself in the Arkansa Prairies, and to him and to Dr. Bootт I am indebted for my first knowledge of the species. Dr. Short finds

finds it abundant in some parts of Kentucky: and Mr. Drummond gathered it both at Rio Brazos and San Felipe de Austin, in Texas, from whence he sent numerous specimens and seeds. From the latter, Mr. Murray has raised plants, which blossomed in a cool frame and in the open air, during the months of June and July, in the Glasgow Botanic Garden. Michaux was assuredly correct in referring the plant to the Genus Bellis, with which it accords in every essential particular. Mr. Arnott, indeed, is of opinion that this plant is the same as the Brachycome *xanthocomoides*, Less. Comp. p. 192, and Linnæa, v. 9. p. 265, from Mexico; but the Bellis *aculeata*, and B. *ciliaris* of Labill., are true genuine species of Brachycome, and the fruit in them is totally different from that of our Bellis.

Descr. *Root* annual, small. *Stems* rarely simple and unbranched, generally they are branched, and frequently many arise from the same root and are spreading or ascending, sparingly downy or hairy, slender; branches filiform. *Leaves* mostly remote, oblong or spathulate, entire, the upper ones nearly sessile, the lower ones broader, almost obovate and more decidedly petiolate: all of them slightly downy or hairy. *Peduncles* terminal upon the stem or branches, elongated, naked, single-flowered: *flowers* drooping before expansion. *Involucre* of about twenty equal leaflets, almost entirely in a single series, linear, very acute, the margins pale and diaphanous. *Corollas of the Ray* fourteen to twenty, ligulate, white, with a purplish tinge, especially on the outside, entire or two-toothed at the apex. *Corollas of the Disc* five-cleft, remarkably contracted at the base. *Anthers* without spurs. *Lobes* of *Stigma* ovate, erect. *Achenium* pyriform, on a pitted *receptacle*, hairy, slightly compressed.

Fig. 1. Floret of Disc. 2. Ditto of the Ray. 3. Receptacle and Involucre. 4. Achenium:—*magnified.*

VELTHEIMIA GLAUCA (*var.* floribus rubescenti-purpureis). GLAUCOUS-LEAVED VELTHEIMIA (red-purple-flowered *var.*)

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Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—LILIACEÆ.)

Generic Character.

Corolla monopetala, cylindraceo-tubulosa; limbo brevissimo erecto-patulo, 6-dentato, regulari, laciniis subæqualibus. *Filamenta* medio tubi adnata, inde libera, inclusa. *Stylus* subulato-filiformis declinatus, stigmate cuspidato. *Capsula* diaphano-membranacea, trialata, subovata: loculis 5 monospermis. *Semina* obovata.

Specific Character and Synonyms.

VELTHEIMIA* *glauca;* foliis lato-lanceolatis patentibus acutis undulatis glaucis, perianthii limbo subpatente. *Jacq. Hort. Schœnbr. v.* 1. *p.* 40. *t.* 77.

VELTHEIMIA glauca. *Willd. Sp. Pl. v.* 2. *p.* 182. *Bot. Mag. t.* 1091. (flore albo.) *Spreng. Syst. Veg. v.* 2. *p.* 75.

ALETRIS glauca. *Ait. Hort. Kew. ed.* 1. *v.* 1. *p.* 485.

Var. floribus rubescenti-purpureis.—Tab. nostr. t. 3456.

VELTHEIMIA glauca. *Redout. Pl. Liliac. v.* 8. *t.* 440.

This handsome Cape bulb is worthy of a place in the pages of this Magazine, not only as exhibiting flowers of a very different colour from those of the same species represented at p. 1091 of this work, but also as showing the true form and direction of the leaves, which in the former plate of

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* In honour of FR. AUG. DE VELTHEIM, a German patron of Botany.

of this Magazine, as well as in the splendid figure given in the Hortus Schœnbrunensis, appear in both cases to have been affected by the plants having been unnaturally drawn up by heat, so as to assume an altogether different appearance. Redouté's figure, on the other hand, is highly characteristic. We are indebted at the Glasgow Botanic Garden for our bulbs to Baron Ludwig, a nobleman resident at the Cape of Good Hope, where he generously devotes his time and his fortune to the promotion of Botany and Horticulture, particularly with the view of rendering service to the colony by the introduction of useful plants. To Europe he has, with the greatest liberality, communicated many rare South African plants, and has enriched our gardens with several new or little known species.

Descr. *Bulb* elongated, covered with dark brown coats. *Leaves* arising from the bulb, the lowermost ones almost ovate and scarcely at all contracted at the base, the rest gradually becoming more elongated, very broadly lanceolate, and patent, acute, glaucous and waved, especially at the margin, faintly striated, beneath having a rather conspicuous thick *costa*, the base attenuated, and in the upper leaves especially, forming a long sheath. *Scape* ten inches to a foot high: bearing a dense *raceme* of *flowers*, erect in the bud, altogether pendent when fully expanded, of a reddish colour marked with paler spots; each segment with a little white spot at the point; the *limb* purple: *Filament* curved, arising from the middle of the tube: *Anthers* oblong, yellow. *Germen* oblong, green, six-angled: *style* as long as the perianth, curved: *stigma* acute.

Fig. 1. Flower. 2. The same cut through vertically:—*magnified.*

Pub by S Curtis. Glazenwood Essex Dec 1 1835

EPIDENDRUM CONOPSEUM. FLORIDA EPIDENDRUM.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Sepala patentia, subæqualia. *Petala* sepalis æqualia vel angustiora, rarius latiora, patentia vel reflexa. *Labellum* cum marginibus columnæ omnino vel parte connatum, limbo integro vel diviso, disco sæpius calloso, costato vel tuberculato; nunc in calcar productum ovario accretum et cuniculum formans. *Columna* elongata; clinandrio marginato, sæpe fimbriato. *Anthera* carnosa, 2—4-locularis. *Pollinia* 4, caudiculis totidem replicatis annexa.—Herbæ *(Americanæ) epiphytæ, caule nunc apice vel basi pseudo-bulboso, nunc elongato apice folioso.* Folia *carnosa, rarissime venis elevatis striata.* Flores *spicati, racemosi, corymbosi, vel paniculati, terminales vel laterales. Lindl.*

Specific Character and Synonyms.

EPIDENDRUM *conopseum;* foliis binis subradicalibus rigidis coriaceis, scapis plurifloris, sepalis linearibus, obtusis petalisque angustioribus spathulatis patentibus, labello obcordato obtuse trilobo.

EPIDENDRUM conopseum. *Br. in Ait. Hort. Kew. ed. 2. v. 5. p.* 219. *Nutt. Gen. Am. v. 2. p.* 198. *Ell. Carol. v. 2. p.* 506. *Spreng. Syst. Veget. v. 3. p.* 757. *Lindl. Gen. et Sp. Orchid. p.* 106.

EPIDENDRUM Magnoliæ. *Muhl. Cat.* 81.

A plant, I believe, of very rare occurrence in our collections, and rendered the more interesting from being the only

only parasitical Orchideous plant found in the United States. It inhabits, indeed, only the southern territories, sometimes growing on the trunk of the Oaks, but far more generally on that of Magnolia *grandiflora*. It was first found by Mr. William Bartram in Florida, and among the very last despatches of plants sent by the late Mr. Drummond, which were from Apalachicola in West Florida, were several specimens of this delicate epiphyte. Mr. Elliott observes, that its most northern limit is at the entrance of Port Royal Inlet, on the coast of Carolina, in lat. 32. Indeed it seems to be confined chiefly to the vicinity of the sea; yet it must be capable of enduring some degree of frost, for at the very time that Mr. Drummond procured his living plants at the spot above-mentioned, the ice was so thick in one night's time as to bear the weight of a man. Our flowering specimens were obligingly communicated by Messrs. Shepherds, from the rich collection of Epiphytes at the Liverpool Botanic Garden, to which it was sent from North Carolina, by Mr. Gordon, attached to branches of Magnolia *grandiflora*.

Descr. Whole plant not more than four to five inches high, slender, graceful. *Roots* thick, fleshy, vermicular. *Stems* short, scarcely an inch long, and not thicker than a sparrow's quill. *Leaves* two, oblongo-lanceolate, acute, springing from the extremity of the short stems, and from the middle of them arises a *peduncle*, bearing five to six pale yellowish-green *flowers*. *Sepals* cuneato-spathulate, spreading: *petals* similar, but narrower. *Lip* three-lobed, lobes broad, middle one emarginate; at the base above are two glands. *Column* elongated, the margin reddish. *Anther-case* hemispærical.

Fig. 1. Front view of the Lip and Column:—*magnified*.

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Pl.
3408 Acacia prensans.
3420 ——— tristis.
3394 ——— undulæfolia.
3380 Anagallis Monelli, *var.* Willmoreana.
3376 Anemone vitifolia.
3413 Barosma crenulata.
3387 Begonia geraniifolia.
3444 ——— heracleifolia.
3455 Bellis integrifolia.
3451 Brassia caudata.
3379 Calandrinia speciosa.
3437 Canna glauca, *γ* rubro-lutea.
3435 Cassia glandulosa.
3388 Catasetum purum.
3381 Cereus grandiflorus.
3405 Chilodia scutellarioides.
3398 Clerodendron hastatum.
3415 Craspedia macrocephala.
3432 Cratægus coccinea.
3430 Crescentia Cujete.
3412 Cypripedium insigne.
3418 Dendrobium densiflorum.
3382 Diplopappus incanus.
3449 Dyckia rariflora.
3411 Echinocactus Eyriesii.
3407 Epacris impressa.
3457 Epidendrum conopseum.
3410 ——— ? stenopetalum.
3448 Epimedium diphyllum.
3427 Erica recurvata.
3399 Eurycles Cunninghamii.
3440 Gilia achilleæfolia.
3404 Goldfussia anisophylla.
3374 Habenaria gigantea.
3397 ——— goodyeroides.
3424 Hakea ferruginea.
3425 Hoya Pottsii.
3421 Isopogon Loudoni.
3450 ——— spathulatus, *var.* linearis.
3383 Justicia carnea.
3419 Leptospermum scoparium, *var.* grandiflorum.
3442 Mespilus lobata.
3377 Microtis parviflora.
3378 ——— media.
3395 Maxillaria Deppii.
3403 Neottia calcarata.

Pl.
3392 Œnothera sinuata.
3393 Oncidium triquetrum.
3426 Orchis tephrosanthos, *var.* densifolius.
3431 Pæonia Russi.
3391 Pentstemon Richardsonii.
3452 Phacelia congesta.
3441 Phlox Drummondii.
3386 Physostegia imbricata.
3396 Plagianthus ? sidoides.
3414 Primula Palinuri.
3445 ——— Sibirica; *β.* integerrima.
3400 Pterostylis concinna.
3401 ——— acuminata.
3443 Pultenæa cordata.
3409 Randia Bowieana.
3439 Rhododendron calendulaceum, *var.* fulgidum.
3423 ——— arboreum, *var.* hybridum altaclerense.
3422 ——— Caucasicum, *var.* stramineum.
3454 ——— maximum, hybridum.
3453 Rubus Nutkanus.
3389 Ruellia elegans.
3406 Saxifraga ligulata.
3436 Sida inæqualis.
3385 Solanum Tweedianum.
3390 Sophora tomentosa, *β.*
3417 Stypandra propinqua.
3375 Tropæolum majus, *var.* atrosanguineum.
3428 Vaccinium albiflorum.
3429 ——— cæspitosum.
3446 ——— Canadense.
3433 ——— corymbosum.
3447 ——— myrtilloides.
3434 ——— Pennsylvanicum.
3416 Vanda Roxburghi, *var.* unicolor.
3456 Veltheimia glauca, (*var.* floribus rubescenti-purpureis).
3384 Wedelia ? aurea.
3438 Westringia eremicola.
3402 Zygopetalum Mackaii, *β.* crinitum.

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Pl.
3420 Acacia, mournful.
3408 ——— prickly-feathered.
3394 ——— wave-leaved, variable.
3376 Anemone, Vine-leaved.
3387 Begonia, Geranium-leaved.
3444 ——— Cow-parsnep-leaved.
3453 Bramble, Nutka.
3451 Brassia, long-tailed.
3413 Bucku, or crenulated Diosma.
3411 Cactus, sweet-scented, spiny.
3430 Calabash Tree.
3379 Calandrinia, showy-flowered.
3435 Cassia, glandular-leaved.
3388 Catasetum, spotless.
3381 Cereus, large-flowered, or night-blowing.
3405 Chilodia, Scutellaria-like.
3398 Clerodendron, halberd-leaved.
3415 Craspedia, large-headed.
3455 Daisy, American.
3418 Dendrobium, many-flowered.
3413 Diosma, crenulated, or Bucku.
3382 Diplopappus, hoary.
3449 Dyckia, few-flowered.
3407 Epacris, foveolated.
3410 Epidendrum, acute-petaled.
3457 ——— Florida.
3448 Epimedium, twin-leaved.
3392 Evening-Primrose, scollop-leaved.
3399 Eurycles, small-flowered, or Brisbane Lily.
3440 Gilia, Milfoil-leaved.
3404 Goldfussia, unequal-leaved.
3374 Habenaria, gigantic.
3397 ——— Goodyera-like.
3424 Hakea, rusty-stalked.
3427 Heath, drooping round-headed.
3425 Hoya, Mr. Pott's.
3375 Indian Cress, or Nasturtium, greater, dark red *var.*
3437 —— Reed, glaucous-leaved, reddish-yellow-flowered *var.*
3421 Isopogon, Mr. Loudon's.
3450 ——— spathulate-leaved, linear-leaved *var.*
3383 Justicia, flesh-coloured.
3412 Lady's slipper, large-flowered.
3419 Leptospermum, rigid-leaved, large-flowered *var.*
3395 Maxillaria, Deppe's.
3442 Medlar, cut-leaved.
3377 Microtis, small-flowered.
3378 Microtis, middle-sized.
3375 Nasturtium, or Indian Cress, dark-red *var.*
3403 Neottia, spurred.
3393 Oncidium, triquetrous-leaved.
3426 Orchis, narrow-lipped military, crowded-flowered *var.*
3431 Pæony, crimson.
3391 Pentstemon, Dr. Richardson's.
3452 Phacelia, cluster-flowered.
3441 Phlox, Mr. Drummond's.
3386 Physostegia, imbricated.
3380 Pimpernel, Italian, Mr. Willmore's *var.*
3396 Plagianthus, Sida-like.
3414 Primrose, Palinurian.
3445 ——— Siberian, entire-leaved *var.*
3400 Pterostylis, neat.
3401 ——— acuminated.
3443 Pultenæa, sharp heart-leaved.
3409 Randia, Mr. Bowie's.
3422 Rhododendron, Caucasian, straw-coloured *var.*
3454 ——— laurel-leaved, hybrid *var.*
3423 ——— Tree, Highclere, hybrid *var.*
3439 ——— flame-coloured, orange-red *var.*
3389 Ruellia, neat blue-flowered.
3406 Saxifrage, fringe-leaved.
3436 Sida, oblique-leaved.
3385 Solanum, Mr. Tweedie's.
3390 Sophora, downy *var.*
3417 Stypandra, slender, azure-flowered.
3416 Vanda, Dr. Roxburgh's whole-coloured *var.*
3456 Veltheimia, glaucous-leaved, (red-purple-flowered *var.*)
3384 Wedelia, golden.
3438 Westringia, Desert.
3432 Whitethorn, large-flowered American.
3433 Whortleberry, many-flowered.
3434 ——— small, willow-leaved.
3428 ——— white-flowered.
3429 ——— dwarf, tufted.
3446 ——— Canadian.
3447 ——— flask-flowered.
3402 Zygopetalum, Mr. Mackay's hairy-lipped *var.*